

# IMPORTANT NOTICE

**THIS DOCUMENT IS NOT FOR DISTRIBUTION TO ANY PERSON OTHER THAN TO INVESTORS WHO ARE PERSONS OTHER THAN U.S. PERSONS (AS DEFINED IN REGULATION S) WITH ADDRESSES OUTSIDE OF THE UNITED STATES.**

**IMPORTANT:** You must read the following notice before continuing. The following notice applies to the information memorandum dated 25 August 2022 as supplemented by the pricing supplement dated 20 July 2023 following this page (the “pricing supplement”), whether received by email, accessed from an internet page or otherwise received as a result of electronic communication and you are therefore advised to read this notice carefully before reading, accessing or making any other use of the pricing supplement. In reading, accessing or making any other use of the pricing supplement, you agree to be bound by the following terms and conditions and each of the restrictions set out in the pricing supplement, including any modifications made to them from time to time, each time you receive any information from us as a result of such access.

**NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY THE SECURITIES DESCRIBED IN THE PRICING SUPPLEMENT IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION AND THE SECURITIES MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT (“REGULATION S”)), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE OR LOCAL SECURITIES LAWS.**

**THE SECURITIES ARE BEING OFFERED AND SOLD ONLY OUTSIDE THE UNITED STATES TO PERSONS OTHER THAN U.S. PERSONS (“U.S. PERSONS”) (AS DEFINED IN REGULATION S) IN OFFSHORE TRANSACTIONS IN ACCORDANCE WITH RULE 903 OR RULE 904 OF REGULATION S. WITHIN THE UNITED KINGDOM, THE PRICING SUPPLEMENT IS DIRECTED ONLY AT PERSONS WHO (A) HAVE PROFESSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS FALLING WITHIN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005 (THE “FPO”); (B) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(a) TO (d) OF THE FPO; OR (C) ARE OTHER PERSONS TO WHOM THE PRICING SUPPLEMENT MAY BE LAWFULLY COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS RELEVANT PERSONS). OUTSIDE OF THE UNITED KINGDOM THE PRICING SUPPLEMENT IS BEING DIRECTED ONLY AT PERSONS WHO MAY LAWFULLY RECEIVE IT.**

**THE PRICING SUPPLEMENT MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THE PRICING SUPPLEMENT IN WHOLE OR IN PART IS UNAUTHORISED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE SECURITIES LAWS OF OTHER JURISDICTIONS. IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORISED AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED IN THE ATTACHED DOCUMENT. THIS DOCUMENT IS NOT INTENDED FOR DISTRIBUTION TO AND MUST NOT BE PASSED ON TO ANY RETAIL CLIENT.**

**Confirmation of your Representation:** In order to be eligible to view the pricing supplement or make an investment decision with respect to the offered securities described therein, (1) each prospective investor in respect of the securities must be a person other than a U.S. Person and (2) each prospective investor in respect of the securities being offered in the United Kingdom must be a Relevant Person. By accepting the e-mail and accessing, reading or making any other use of the attached pricing supplement, you shall be deemed to have represented to each of SG Securities (HK) Limited, Taipei Branch, Cathay United Bank Co., Ltd., CTBC Bank Co., Ltd., KGI Securities Co. Ltd., Mega International Commercial Bank Co., Ltd., President Securities Corporation, SinoPac Securities Corporation, The Shanghai Commercial & Savings Bank, Ltd., Taishin International Bank Co. Ltd. and Yuanta Securities Co., Ltd. (collectively, the “Managers”) being the sender of the attached, that (1) you are (or the person you represent is) a person other than a U.S. Person, and that the electronic mail (or e-mail) address to which, pursuant to your request, the pricing supplement has been delivered by electronic transmission is utilised by a person other than a U.S. Person and (2) in respect of the securities being offered in the United Kingdom, you are (or the person you represent is) a Relevant Person.

You are reminded that the pricing supplement has been delivered to you on the basis that you are a person into whose possession the pricing supplement may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not, nor are you authorised to, deliver or disclose the contents of this pricing supplement to any other person. Failure to comply with this directive may result in a violation of the Securities Act or the applicable laws of other jurisdictions.

**Notice to capital market intermediaries and prospective investors pursuant to paragraph 21 of the Hong Kong SFC Code of Conduct – Important Notice to Prospective Investors:** Prospective investors should be aware that certain intermediaries in the context of the offering of the Notes, including the Managers, are “capital market intermediaries” (together, the “CMI”) subject to Paragraph 21 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission (the “Code”). This notice to prospective investors is a summary of certain obligations the Code imposes on such CMIs, which require the attention and cooperation of prospective investors. Certain CMIs may also be acting as “overall coordinators” (together, the “OCs”) for the offering and are subject to additional requirements under the Code.

Prospective investors who are the directors, employees or major shareholders of the Korea Development Bank (the “Issuer”), a CMI or its group companies would be considered under the Code as having an association (an “Association”) with the Issuer, the CMI or the relevant group company. Prospective investors associated with the Issuer or any CMI (including its group companies) should specifically disclose this when placing an order for the Notes and should disclose, at the same time, if such orders may negatively impact the price discovery process in relation to the offering. Prospective investors who do not disclose their Associations are hereby deemed not to be so associated. Where prospective investors disclose their Associations but do not disclose that such order may negatively impact the price discovery process in relation to the offering, such order is hereby deemed not to negatively impact the price discovery process in relation to the offering.

Prospective investors should ensure, and by placing an order prospective investors are deemed to confirm, that orders placed are bona fide, are not inflated and do not constitute duplicated orders (i.e. two or more corresponding or identical orders placed via two or more CMIs). If a prospective investor is an asset management arm affiliated with the Managers, such prospective investor should indicate when placing an order if it is for a fund or portfolio where the Managers or its group company has more than 50% interest, in which case it will be classified as a “proprietary order” and subject to appropriate handling by CMIs in accordance with the Code and should disclose, at the same time, if such “proprietary order” may

negatively impact the price discovery process in relation to the offering. Prospective investors who do not indicate this information when placing an order are hereby deemed to confirm that their order is not such a "proprietary order". If a prospective investor is otherwise affiliated with the Managers, such that its order may be considered to be a "proprietary order" (pursuant to the Code), such prospective investor should indicate to the Managers when placing such order. Prospective investors who do not indicate this information when placing an order are hereby deemed to confirm that their order is not such a "proprietary order". Where prospective investors disclose such information but do not disclose that such "proprietary order" may negatively impact the price discovery process in relation to the offering, such "proprietary order" is hereby deemed not to negatively impact the price discovery process in relation to the offering.

Prospective investors should be aware that certain information may be disclosed by CMIs (including Private Banks) which is personal and/or confidential in nature to the prospective investor. By placing an order, prospective investors are deemed to have understood and consented to the collection, disclosure, use and transfer of such information by the Managers and/or any other third parties as may be required by the Code, including to the Issuer, any OCs, relevant regulators and/or any other third parties as may be required by the Code, it being understood and agreed that such information shall only be used for the purpose of complying with the Code, during the bookbuilding process for the offering. Failure to provide such information may result in that order being rejected.

The materials relating to the offering do not constitute, and may not be used in connection with, an offer or solicitation in any place where such offers or solicitations are not permitted by law. If a jurisdiction requires that the offering be made by a licensed broker or dealer and the Managers or any affiliate of the Managers is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by the Managers or such affiliate on behalf of the Issuer in such jurisdiction.

Recipients of the pricing supplement who intend to subscribe for or purchase the securities are reminded that any subscription or purchase may only be made on the basis of the information contained in the final pricing supplement.

The pricing supplement has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently, none of the Managers, the Issuer nor any person who controls any of them or is a director, officer, employee or agent of any of them nor any affiliate of any such person accepts any liability or responsibility whatsoever to the fullest extent permitted by law in respect of any difference between the pricing supplement distributed to you in electronic format and the hard copy version available to you on request from the Managers. You are responsible for protecting against viruses and other destructive items. Your use of this e-mail is at your own risk and it is your responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

**The distribution of the pricing supplement in certain jurisdictions may be restricted by law. Persons into whose possession the pricing supplement comes are required by the Managers and the Issuer to inform themselves about, and to observe, any such restrictions.**



**KDB Bank**

*(incorporated with limited liability under the laws of the Republic of Korea)*

*(acting through its principal office in Korea)*

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**Issue of U.S.\$300,000,000 Floating Rate Senior Unsecured Notes due 2028  
under the U.S.\$30,000,000,000 Global Medium Term Note Programme**

THE NOTES TO WHICH THIS PRICING SUPPLEMENT RELATES (THE **NOTES**) HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE **SECURITIES ACT**), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND, UNLESS SO REGISTERED, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATIONS UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS. ACCORDINGLY, THE NOTES WILL BE OFFERED AND SOLD ONLY OUTSIDE THE UNITED STATES TO NON-U.S. PERSONS IN RELIANCE ON REGULATIONS.

A REGISTRATION STATEMENT FOR THE OFFERING AND SALE OF THE NOTES HAS NOT BEEN FILED WITH THE FINANCIAL SERVICES COMMISSION OF KOREA. ACCORDINGLY, THE NOTES MAY NOT BE OFFERED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, IN KOREA OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA (AS SUCH TERM IS DEFINED UNDER THE FOREIGN EXCHANGE TRANSACTION ACT OF KOREA AND ITS ENFORCEMENT DECREE AND REGULATIONS THEREUNDER), EXCEPT AS OTHERWISE PERMITTED BY APPLICABLE KOREAN LAWS AND REGULATIONS. FURTHERMORE, A HOLDER OF THE NOTES SHALL BE PROHIBITED FROM OFFERING, DELIVERING OR SELLING ANY NOTES, DIRECTLY OR INDIRECTLY, IN KOREA OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA, EXCEPT AS OTHERWISE PERMITTED BY APPLICABLE KOREAN LAWS AND REGULATIONS.

***Lead Manager***

**SG Securities (HK) Limited, Taipei Branch**

***Co-Managers***

**Cathay United Bank Co., Ltd.**

**CTBC Bank Co., Ltd.**

**KGI Securities Co. Ltd.**

**Mega International Commercial Bank Co., Ltd.**

**President Securities Corporation**

**SinoPac Securities Corporation**

**The Shanghai Commercial & Savings Bank, Ltd.**

**Taishin International Bank Co. Ltd.**

**Yuantan Securities Co., Ltd.**

The date of this Pricing Supplement is 20 July 2023.

**THE KOREA DEVELOPMENT BANK**  
(acting through its principal office in Korea)

**Issue of U.S.\$300,000,000 Floating Rate Senior Unsecured Notes due 2028  
under the U.S.\$30,000,000,000 Global Medium Term Note Programme**

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Conditions set forth in the Information Memorandum dated 25 August 2022 (the “**Information Memorandum**”). This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with such Information Memorandum.

The Notes have not been registered with the Financial Services Commission of Korea under the Financial Investment Services and Capital Markets Act of Korea. Accordingly, the Notes may not be offered delivered, or sold directly or indirectly in the Republic of Korea (“**Korea**”) or to any resident of Korea (as defined in the Foreign Exchange Transaction Act of Korea and the rules and regulations promulgated thereunder) or to others for re-offering or resale directly or indirectly in Korea or to any resident of Korea except as otherwise permitted under applicable Korean laws and regulations.

**MiFID II product governance** —Solely for the purposes of each manufacturer’s product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, “**MiFID II**”); and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a “**distributor**”) should take into consideration the manufacturers’ target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturers’ target market assessment) and determining the appropriate distribution channels.

Notification under Section 309B(1)(c) of the Securities and Futures Act 2001 of Singapore (the “**SFA**”) – the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

1.	Issuer: .....	The Korea Development Bank, acting through its principal office in Korea
2.	(i) Series Number: .....	970
	(ii) Tranche Number: .....	1
3.	Specified Currency or Currencies: .....	United States dollars (U.S.\$)
4.	Aggregate Nominal Amount: .....	
	(i) Series: .....	U.S.\$300,000,000
	(ii) Tranche: .....	U.S.\$300,000,000
5.	Issue Price of Tranche: .....	100.000 per cent. of the Aggregate Nominal Amount

6.	(i)	Specified Denominations: .....	U.S.\$200,000 and, in excess thereof, integral multiples of U.S.\$1,000
	(ii)	Calculation Amount .....	U.S.\$1,000
7.	(i)	Issue Date: .....	1 August 2023
	(ii)	Interest Commencement Date: .....	Issue Date
8.		Maturity Date: .....	1 August 2028
9.		Interest Basis: .....	Compounded Daily SOFR + 0.90 per cent.
10.		Redemption/Payment Basis: .....	Redemption at par
11.		Change of Interest or Redemption/Payment Basis: .....	Not Applicable
12.		Put/Call Options: .....	Not Applicable
13.		Listing: .....	<p>Singapore Exchange Securities Trading Limited (the “<b>Singapore Stock Exchange</b>”)</p> <p>Taipei Exchange (the “<b>TPEX</b>”)</p> <p>Application will be made by the Issuer to the TPEX for the listing and trading of the Notes on the TPEX.</p> <p>TPEX is not responsible for the content of this document and the Information Memorandum and any amendment and supplement thereto and no representation is made by TPEX to the accuracy or completeness of this document and the Information Memorandum and any amendment and supplement thereto. TPEX expressly disclaims any and all liability for any losses arising from, or as a result of the reliance on, all or part of the contents of this document and the Information Memorandum and any amendment and supplement thereto. Admission to the listing and trading of the Notes on the TPEX shall not be taken as an indication of the merits of the Issuer or the Notes. The Notes will be traded on the TPEX pursuant to the applicable rules of the TPEX. Effective date of listing of the Notes is on or about 1 August 2023.</p>
14.		Method of distribution: .....	Syndicated

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| 15. | Prohibition of Sales to EEA and UK Retail Investors: ..... | Not Applicable |
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**PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE**

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|-------|---|--|
| 16.   | Fixed Rate Note Provisions .....  | Not Applicable   |
| 17.   | Floating Rate Note Provisions .....   | Applicable   |
| (i)   | Specified Period(s)/Specified Interest Payment Dates: .....   | Quarterly on 1 February, 1 May, 1 August, 1 November of each year commencing on 1 November, subject to adjustment in accordance with the Business Day Convention specified below |
| (ii)  | Business Day Convention: .....  | Modified Following Business Day Convention   |
| (iii) | Additional Business Centre(s): .....  | Seoul, Taipei, London and New York City  |
| (iv)  | Manner in which the Rate of Interest and Interest Amount is to be determined: .....                         | Screen Rate Determination  |
| (v)   | Party responsible for calculating the Rate of Interest and Interest Amount (if not the Fiscal Agent): ..... | Not Applicable   |
| (vi)  | Screen Rate Determination:  |  |
| –     | Reference Rate: .....   | SOFR Benchmark   |
| –     | Interest Determination Date(s): .....   | Fifth U.S. Government Securities Business Day prior to the last day of each Interest Period  |
| –     | Relevant Screen Page: .....   | Not Applicable   |
| –     | SOFR Benchmark: .....   | Compounded Daily SOFR  |
| –     | Compounded Daily SOFR: .....  | SOFR Lag   |
| –     | Lookback Days: .....  | 5 U.S. Government Securities Business Days   |
| –     | SOFR Observation Shift Days: .....  | Not Applicable   |
| –     | SOFR Index <sub>start</sub> : .....   | Not Applicable   |
| –     | SOFR Index <sub>end</sub> : .....   | Not Applicable   |
| (vii) | ISDA Determination: .....   |  |
| –     | Floating Rate Option: .....   | Not Applicable   |
| –     | Designated Maturity: .....  | Not Applicable   |
| –     | Reset Date: .....   | Not Applicable   |

	(viii)	Margin(s): .....	+ 0.90 per cent. per annum
	(ix)	Minimum Rate of Interest: .....	Not Applicable
	(x)	Maximum Rate of Interest: .....	Not Applicable
	(xi)	Day Count Fraction: .....	Actual/360
	(xii)	Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions: .....	Not Applicable
18.		Zero Coupon Note Provisions .....	Not Applicable
19.		Index Linked Interest Note Provisions .....	Not Applicable
20.		Dual Currency Note Provisions .....	Not Applicable
<b>PROVISIONS RELATING TO REDEMPTION</b>			
21.		Issuer Call: .....	Not Applicable
22.		Investor Put: .....	Not Applicable
23.		Final Redemption Amount: .....	U.S.\$1,000 per Calculation Amount
24.		Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 5(f)):	U.S.\$1,000 per Calculation Amount
<b>GENERAL PROVISIONS APPLICABLE TO THE NOTES</b>			
25.		Form of Notes: .....	Registered Notes: Regulation S Global Note registered in the name of a common depositary for Euroclear and Clearstream, Luxembourg
26.		Additional Financial Centre(s) or other special provisions relating to Payment Day:	Seoul, Taipei, London and New York City
27.		Talons for future Coupons or Receipts to be attached to Definitive Notes in bearer form (and dates on which such Talons mature): ...	No
28.		Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment: .....	Not Applicable
29.		Details relating to Instalment Notes:	

- (i) Instalment Amount(s): ..... Not Applicable
- (ii) Instalment Date(s): ..... Not Applicable
30. Redenomination applicable: ..... Redenomination not applicable
31. Other terms or special conditions: ..... Not Applicable

## DISTRIBUTION

32. (i) If syndicated, names of Managers: Lead Manager  
SG Securities (HK) Limited, Taipei Branch  
Co-Managers  
Cathay United Bank Co., Ltd.  
CTBC Bank Co., Ltd.  
KGI Securities Co. Ltd.  
Mega International Commercial Bank Co., Ltd.  
President Securities Corporation  
SinoPac Securities Corporation  
The Shanghai Commercial & Savings Bank, Ltd.  
Taishin International Bank Co. Ltd.  
Yuanta Securities Co., Ltd.
- (ii) Date of Subscription Agreement: ..... 24 July 2023
- (iii) Stabilising Manager (if any): ..... Not Applicable
33. If non-syndicated, name of relevant Dealer: Not Applicable
34. US Selling Restrictions: ..... Regulation S, Category 2 / TEFRA not applicable
35. Additional selling restrictions: ..... The Notes have not been, and shall not be, offered, sold or re-sold, directly or indirectly to investors other than "professional investors" as defined under Paragraph 1 of Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds (the "TPEX Rules"). Purchasers of the Notes are not permitted to sell or otherwise dispose of the Notes except by transfer to a Professional Investor.

## OPERATIONAL INFORMATION

36. Any clearing system(s) other than Euroclear and Clearstream, Luxembourg or DTC and the relevant identification number(s): ..... Not Applicable

37.	Delivery: .....	Delivery against payment through non-syndicated settlement account
38.	Additional Paying Agent(s) (if any): .....	Not Applicable
39.	ISIN: .....	XS2655885148
40.	Common Code: .....	265588514
41.	LEI: .....	549300ML2LNRZUCS7149

## RISK REGARDING BENCHMARK REGULATION REFORMS

Interest rates and indices which are deemed to be or are used as “benchmarks” are the subject of recent international regulatory guidance and proposals for reform, particularly in the United Kingdom. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past or to disappear entirely or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on any Notes linked to or referencing such a benchmark. Regulation (EU) 2016/1011 (the “**Benchmarks Regulation**”) was published in the Official Journal of the EU on 29 June 2016 and applies from 1 January 2018 (with the exception of provisions specified in Article 59 (mainly on critical benchmarks) that apply from 30 June 2016 and 3 July 2016). The Benchmarks Regulation applies to the provision of benchmarks, the contribution of input data to a benchmark and the use of a benchmark within the EU. It will, among other things, (i) require benchmark administrators to be authorised or registered (or, if non-EU-based, to be subject to an equivalent regime or otherwise recognised or endorsed) and (ii) prevent certain uses by EU supervised entities of benchmarks of administrators that are not authorised or registered (or, if non-EU based, not deemed equivalent or recognised or endorsed).

The Benchmarks Regulation could have a material impact on any Notes linked to or referencing a benchmark, in particular, if the methodology or other terms of the benchmark are changed in order to comply with the requirements of the Benchmarks Regulation. Such changes could, among other things, have the effect of reducing, increasing or otherwise affecting the volatility of the published rate or level of the benchmark.

More broadly, any of the international reforms, particularly in the United Kingdom or the general increased regulatory scrutiny of benchmarks, could increase the costs and risks of administering or otherwise participating in the setting of a benchmark and complying with any such regulations or requirements. For example, the sustainability of LIBOR has been questioned as a result of the absence of relevant active underlying markets and possible disincentives (including as a result of regulatory reforms) for market participants to continue contributing to such benchmarks. On 27 July 2017, the United Kingdom Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR benchmark after 2021 (the “**FCA Announcement**”). The FCA Announcement indicated that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. On 5 March 2021, the FCA announced that (i) the publication of 24 LIBOR settings (as detailed in the FCA announcement) will cease immediately after 31 December 2021, (ii) the publication of the overnight and 12-month U.S. dollar LIBOR settings will cease immediately after 30 June 2023, (iii) immediately after 31 December 2021, the 1-month, 3-month, and 6-month sterling LIBOR settings will no longer be representative of the underlying market and economic reality that they are intended to measure and representativeness will not be restored (and the FCA will consult on requiring the ICE Benchmark Administration Limited (the “**IBA**”) to continue to publish these settings on a synthetic basis, which will no longer be

representative of the underlying market and economic reality that they are intended to measure, for a further period after end 2021) and (iv) immediately after 30 June 2023, the 1-month, 3-month, and 6-month U.S. dollar LIBOR settings will no longer be representative of the underlying market and economic reality they are intended to measure and representativeness will not be restored (and the FCA will consider the case for using its proposed powers to require IBA to continue publishing these settings on a synthetic basis, which will no longer be representative of the underlying market and economic reality they are intended to measure, for a further period after end June 2023).

The elimination of the LIBOR benchmark or any other benchmark, or changes in the manner of administration of any benchmark, could require an adjustment to the terms and conditions, or result in other consequences, in respect of any Notes linked to such benchmark (including, but not limited to, floating rate Notes whose interest rates are linked to LIBOR). Such factors may have the following effects on certain benchmarks: (i) discourage market participants from continuing to administer or contribute to the benchmark; (ii) trigger changes in the rules or methodologies used in the benchmark; or (iii) lead to the disappearance of the benchmark.

Any of the above changes or any other consequential changes as a result of international reforms, particularly in the United Kingdom, or other initiatives or investigations, could have a material adverse effect on the value of and return on any Notes linked to or referencing a benchmark.

Investors should consult their own independent advisers and make their own assessment about the potential risks imposed by the Benchmarks Regulation or any other international reforms, particularly in the United Kingdom, in making any investment decision with respect to any Notes linked to or referencing a benchmark. Investors should be aware that, if LIBOR were discontinued or otherwise unavailable, the rate of interest on Floating Rate Notes which reference LIBOR will be determined for the relevant period by the fall-back provisions applicable to such Notes. Depending on the manner in which the LIBOR rate is to be determined under the Terms and Conditions of the Notes, this may (i) if ISDA Determination applies, be reliant upon the provision by reference banks of offered quotations for the LIBOR rate which, depending on market circumstances, may not be available at the relevant time or (ii) if Screen Rate Determination applies, result in the effective application of a fixed rate based on the rate which applied in the previous period when LIBOR was available. In addition, the Terms and Conditions of the Notes provide that we may appoint an Independent Adviser to determine a Successor Rate or an Alternative Rate applicable to Floating Rate Notes if a Benchmark Event occurs (each term as defined in "*Terms and Conditions of the Notes*"). Any of the foregoing could have an adverse effect on the value or liquidity of, and return on, any Floating Rate Notes which reference LIBOR.

## **LISTING APPLICATION**

This Pricing Supplement comprises the final terms required to list the issue of Notes described herein pursuant to the U.S.\$30,000,000,000 Global Medium Term Note Programme of The Korea Development Bank, acting through its principal office in Korea.

The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Pricing Supplement. Approval in-principle from, admission to the Official List of, and the listing and quotation of the Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Programme or the Notes.

TPEX is not responsible for the content of this document and the Information Memorandum and any amendment and supplement thereto and no representation is made by TPEX to the accuracy or completeness of this document and the Information Memorandum and any amendment and supplement thereto. TPEX expressly disclaims any and all liability for any losses arising from, or as

a result of the reliance on, all or part of the contents of this document and the Information Memorandum and any amendment and supplement thereto. Admission to the listing and trading of the Notes on the TPEX shall not be taken as an indication of the merits of the Issuer or the Notes. The Notes will be traded on the TPEX pursuant to the applicable rules of the TPEX. Effective date of listing of the Notes is on or about 1 August 2023.

## **SCHEDULE A – Recent Developments**

*This section provides information that supplements or replaces certain information in the Information Memorandum under the headings corresponding to the headings below. Capitalized terms used without definition in this section or elsewhere in this Pricing Supplement have the meanings given to such terms in the Information Memorandum. If the information in this section differs from the information in the Information Memorandum, potential investors should refer to the information in this section.*

### **RISK FACTORS RELATING TO THE NOTES AND OTHER INFORMATION**

#### **Additional Risks**

Application will be made for the listing of the Notes on the TPEX. No assurances can be given as to whether the Notes will be, or will remain, listing on TPEX or whether a trading market for the Notes will develop or as to the liquidity of any such trading market. If the Notes fail to or cease to be listed on the TPEX, certain investors may not invest in, or continue to hold or invest in, the Notes.

#### **Republic Of China (“ROC”) Taxation**

*The following is a general description of the principal ROC tax consequences for investors receiving interest in respect of, or disposing of, the Notes and is of a general nature based on the Issuer’s understanding of current law and practice. It does not purport to be comprehensive and does not constitute legal or tax advice.*

*This general description is based upon the law as in effect on the date hereof and that the Notes will be issued, offered, sold and re-sold to professional investors as defined under Paragraph 1 of Article 2-1 of the TPEX Rules only. This description is subject to change potentially with retroactive effect. Investors should appreciate that, as a result of changing law or practice, the tax consequences may be otherwise than as stated below. Investors should consult their professional advisers on the possible tax consequences of subscribing for, purchasing, holding or selling the Notes.*

#### **Interest on the Notes**

As the Issuer of the Notes is not a ROC statutory tax withholder, there is no ROC withholding tax on the interest or deemed interest to be paid by the Issuer on the Notes.

Payments of interest or deemed interest under the Notes to an ROC individual holder are not subject to ROC income tax as such payments received by him/her are not considered to be ROC-sourced income. However, such holder must include the interest or deemed interest in calculating his/her basic income for the purpose of calculating his/her alternative minimum tax (“**AMT**”), unless the sum of the interest or deemed interest and other non- ROC-sourced income received by such holder and the person(s) who is (are) required to jointly file the tax return in a calendar year is below 1 million New Taiwan Dollars (“**NT\$**”). If the amount of the AMT exceeds the annual income tax calculated pursuant to ROC Income Basic Tax Act (also known as the AMT Act), the excess becomes such holder’s AMT payable.

ROC corporate holders must include the interest or deemed interest receivable under the Notes as part of their taxable income and pay income tax at a flat rate of 20% (unless the total taxable income for a fiscal year is NT\$120,000 or under), as they are subject to income tax on their worldwide income on an accrual basis. The AMT is not applicable.

#### **Sale of the Notes**

In general, the sale of corporate bonds or financial bonds is subject to 0.1% securities transaction tax (“**STT**”) on the transaction price. However, Article 2-1 of the ROC Securities Transaction Tax Act

prescribes that STT will cease to be levied on the sale of corporate bonds and financial bonds from 1 January 2010 to 31 December 2026. Therefore, the sale of the Notes will be exempt from STT if the sale is conducted on or before 31 December 2026. Starting from 1 January 2027, any sale of the Notes will be subject to STT at 0.1% of the transaction price, unless otherwise provided by the tax laws that may be in force at that time.

Capital gains generated from the sale of bonds are exempt from ROC income tax. Accordingly, ROC individual and corporate holders are not subject to ROC income tax on any capital gains generated from the sale of the Notes. In addition, ROC individual holders are not subject to AMT on any capital gains generated from the sale of the Notes. However, ROC corporate holders should include the capital gains in calculating their basic income for the purpose of calculating their AMT. If the amount of the AMT exceeds the annual income tax calculated pursuant to the ROC Income Basic Tax Act (also known as the AMT Act), the excess becomes the ROC corporate holders' AMT payable. Capital losses, if any, incurred by such holders could be carried over 5 years to offset against capital gains of same category of income for the purposes of calculating their AMT.

Non-ROC corporate holders with a fixed place of business (e.g., a branch) or a business agent in the ROC are not subject to income tax on any capital gains generated from the sale of the Notes. However, their fixed place of business or business agent should include any such capital gains in calculating their basic income for the purpose of calculating AMT.

As to non-ROC corporate holders without a fixed place of business and a business agent in the ROC, they are not subject to income tax or AMT on any capital gains generated from the sale of the Notes.

### ***ROC Settlement and Trading***

The Issuer has not entered into any settlement agreement with Taiwan Depository & Clearing Corporation ("TDCC") and has no intention to do so.

In the future, if the Issuer enters into a settlement agreement with TDCC, an investor, if it has a securities book-entry account with a Taiwan securities broker and a foreign currency deposit account with a Taiwanese bank, may settle the Notes through the account of TDCC with Euroclear or Clearstream if it applies to TDCC (by filling in a prescribed form) to transfer the Notes in its own account with Euroclear or Clearstream to such TDCC account with Euroclear or Clearstream for trading in the domestic market or vice versa for trading in overseas markets. For settlement through TDCC, TDCC will allocate the respective Notes position to the securities book-entry account designated by such investor in the ROC. The Notes will be traded and settled pursuant to the applicable rules and operating procedures of TDCC and the TPEx as domestic bonds. For such investors who hold their interest in the Notes through an account opened and held by TDCC with Euroclear or Clearstream, distributions of principal and/or interest for the Notes to such holders may be made by payment services banks whose systems are connected to TDCC to the foreign currency deposit accounts of the holders. Such payment is expected to be made on the second Taiwanese business day following TDCC's receipt of such payment (due to time difference, the payment is expected to be received by TDCC one Taiwanese business day after the distribution date). However, when the holders actually receive such distributions may vary depending upon the daily operations of the Taiwanese banks with which the holder has the foreign currency deposit account.

## SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

### **Notice to capital market intermediaries and prospective investors pursuant to paragraph 21 of the Hong Kong SFC Code of Conduct**

**Important Notice to CMLs (including private banks):** This notice to CMLs (including private banks) is a summary of certain obligations the Code imposes on CMLs, which require the attention and cooperation of other CMLs (including private banks). Certain CMLs may also be acting as OCs for this offering and are subject to additional requirements under the Code.

Prospective investors who are the directors, employees or major shareholders of the Issuer, a CML or its group companies would be considered under the Code as having an Association with the Issuer, the CML or the relevant group company. CMLs should specifically disclose whether their investor clients have any Association when submitting orders for the Notes. In addition, private banks should take all reasonable steps to identify whether their investor clients may have any Associations with the Issuer or any CML (including its group companies) and inform the Managers accordingly.

CMLs are informed that the marketing and investor targeting strategy for this offering includes institutional investors, sovereign wealth funds, pension funds, hedge funds, family offices and high net worth individuals, in each case, subject to the selling restrictions set out elsewhere in this Information Memorandum and the applicable Pricing Supplement.

CMLs should ensure that orders placed are bona fide, are not inflated and do not constitute duplicated orders (i.e. two or more corresponding or identical orders placed via two or more CMLs). CMLs should enquire with their investor clients regarding any orders which appear unusual or irregular. CMLs should disclose the identities of all investors when submitting orders for the Notes (except for omnibus orders where underlying investor information may need to be provided to any OCs when submitting orders). Failure to provide underlying investor information for omnibus orders, where required to do so, may result in that order being rejected. CMLs should not place “X-orders” into the order book.

CMLs should segregate and clearly identify their own proprietary orders (and those of their group companies, including private banks as the case may be) in the order book and book messages.

CMLs (including private banks) should not offer any rebates to prospective investors or pass on any rebates provided by the Issuer. In addition, CMLs (including private banks) should not enter into arrangements which may result in prospective investors paying different prices for the Notes.

The Code requires that a CML disclose complete and accurate information in a timely manner on the status of the order book and other relevant information it receives to targeted investors for them to make an informed decision. In order to do this, those Managers in control of the order book should consider disclosing order book updates to all CMLs.

When placing an order for the Notes, private banks should disclose, at the same time, if such order is placed other than on a “principal” basis (whereby it is deploying its own balance sheet for onward selling to investors). Private banks who do not provide such disclosure are hereby deemed to be placing their order on such a “principal” basis. Otherwise, such order may be considered to be an omnibus order pursuant to the Code. Private banks should be aware that placing an order on a “principal” basis may require the relevant affiliated Managers (if any) to categorize it as a proprietary order and apply the “proprietary orders” requirements of the Code to such order and will result in that private bank not being entitled to, and not being paid, any rebate.

In relation to omnibus orders, when submitting such orders, CMLs (including private banks) that are subject to the Code should disclose underlying investor information in respect of each order

constituting the relevant omnibus order (failure to provide such information may result in that order being rejected). Underlying investor information in relation to omnibus orders should consist of:

- The name of each underlying investor;
- A unique identification number for each investor;
- Whether an underlying investor has any “Associations” (as used in the Code);
- Whether any underlying investor order is a “Proprietary Order” (as used in the Code);
- Whether any underlying investor order is a duplicate order.

Underlying investor information in relation to omnibus order should be sent to [list.asiapac-glfi-syn-cap@sgcib.com](mailto:list.asiapac-glfi-syn-cap@sgcib.com).

To the extent information being disclosed by CMLs and investors is personal and/or confidential in nature, CMLs (including private banks) agree and warrant: (A) to take appropriate steps to safeguard the transmission of such information to any OCs; and (B) that they have obtained the necessary consents from the underlying investors to disclose such information to any OCs. By submitting an order and providing such information to any OCs, each CML (including private banks) further warrants that they and the underlying investors have understood and consented to the collection, disclosure, use and transfer of such information by any OCs and/or any other third parties as may be required by the Code, including to the Issuer, relevant regulators and/or any other third parties as may be required by the Code, for the purpose of complying with the Code, during the bookbuilding process for this offering. CMLs that receive such underlying investor information are reminded that such information should be used only for submitting orders in this offering. The Joint Lead Managers may be asked to demonstrate compliance with their obligations under the Code, and may request other CMLs (including private banks) to provide evidence showing compliance with the obligations above (in particular, that the necessary consents have been obtained). In such event, other CMLs (including private banks) are required to provide the relevant Manager with such evidence within the timeline requested.

**SCHEDULE B – Consolidated Financial Statements as of and for the Years ended 31  
December 2022 and 2021**

## **Independent Auditors' Report**

Based on a report originally issued in Korean

The Board of Directors and Shareholders  
Korea Development Bank

### **Opinion**

We have audited the accompanying consolidated financial statements of Korea Development Bank and its subsidiaries (collectively, the "Group"), which comprise the consolidated statements of financial position as of December 31, 2022 and 2021, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2022 and 2021, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS").

### **Basis for Opinion**

We conducted our audit in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Other Matter**

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such financial statements may differ from those generally accepted and applied in other countries.

### **Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Korean IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

### **Auditor's Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Seoul, Korea  
March 28, 2023

This report is effective as of March 28, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

Korea Development Bank and Subsidiaries  
Consolidated Statements of Financial Position  
December 31, 2022 and 2021

<i>(In millions of won)</i>	<b>Notes</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
<b>Assets</b>			
Cash and due from banks	4,41,49,50,53	₩ 11,437,022	11,853,364
Securities measured at FVTPL	5,49,50,53	19,110,409	11,738,330
Securities measured at FVOCI	6,41,49,50,53	46,980,682	39,064,390
Securities measured at amortized cost	7,41,49,50,53	10,212,258	6,203,858
Loans measured at FVTPL	8,49,50,53	542,619	644,412
Loans measured at amortized cost	9,43,49,50,53	210,857,626	179,182,355
Derivative financial assets	10,49,50,51,53	9,390,972	5,101,962
Investments in associates	11,52	22,517,464	31,548,070
Property and equipment, net	12,52	808,181	1,420,646
Investment property, net	13,52	151,676	83,637
Intangible assets, net	14,52	203,508	176,197
Defined benefit assets	22	88,663	-
Deferred tax assets	39	169,678	1,232
Current tax assets		173,352	9,297
Other assets	15,49,50,53	9,428,478	6,573,735
Assets held for sale	16	12,052,539	40,296,751
<b>Total assets</b>		<b>₩ 354,125,127</b>	<b>333,898,236</b>
<b>Liabilities</b>			
Financial liabilities measured at FVTPL	17,49,50,53	₩ 1,469,724	2,067,144
Deposits	18,49,50,53	70,288,133	53,839,129
Borrowings	19,49,50,53	30,131,079	28,561,063
Debentures	20,49,50,53	164,460,858	150,014,919
Derivative financial liabilities	10,49,50,51,53	11,409,250	4,752,838
Policy reserves	21	18,076,810	-
Defined benefit liabilities	22	-	9,246
Provisions	23	689,829	645,329
Deferred tax liabilities	39	3,487,859	6,496,971
Current tax liabilities		75,657	316,231
Other liabilities	24,49,50,53	8,773,362	8,037,265
Liabilities held for sale	16,21	9,371,802	32,999,924
<b>Total liabilities</b>		<b>₩ 318,234,363</b>	<b>287,740,059</b>

*(Continued)*

Korea Development Bank and Subsidiaries  
Consolidated Statements of Financial Position, Continued  
December 31, 2022 and 2021

<i>(In millions of won)</i>	<b>Notes</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
<b>Equity</b>			
Issued capital	25 ₩	23,151,559	21,886,559
Capital surplus	25	911,588	758,560
Capital adjustment	25	274,457	278,392
Accumulated other comprehensive income	25	3,007,685	4,977,670
Retained earnings	25	6,552,360	14,090,106
(Regulatory reserve for credit losses of ₩272,805 million and ₩502,744 million as of December 31, 2022 and 2021, respectively)			
(Required reversal of regulatory reserve for credit losses of ₩18,231 million and ₩229,939 million as of December 31, 2022 and 2021, respectively)			
(Planned reversal of regulatory reserve for credit losses of ₩18,231 million and ₩229,939 million as of December 31, 2022 and 2021, respectively)			
<b>Total equity attributable to owners of the parent</b>		<u>33,897,649</u>	<u>41,991,287</u>
<b>Non-controlling interests</b>	46	<u>1,993,115</u>	<u>4,166,890</u>
<b>Total equity</b>		<u>35,890,764</u>	<u>46,158,177</u>
<b>Total liabilities and equity</b>	₩	<u>₩354,125,127</u>	<u>₩333,898,236</u>

See accompanying notes to the consolidated financial statements.

Korea Development Bank and Subsidiaries  
Consolidated Statements of Comprehensive Income  
Years ended December 31, 2022 and 2021

(In millions of won, except earnings per share information)

	Notes	2022	2021
<b>Continuing operations:</b>			
Interest income	26 ₩	8,128,647	5,142,256
Interest expense	26	(5,369,074)	(2,651,703)
<b>Net interest income</b>		<b>2,759,573</b>	<b>2,490,553</b>
Net fees and commission income	27	583,309	420,569
Dividend income	28	479,813	320,512
Net gain (loss) on securities measured at FVTPL	29	(81,647)	211,338
Net gain on financial instruments designated at FVTPL	30	465,099	149,918
Net loss on securities measured at FVOCI	31	(72,828)	(29,970)
Net gain (loss) on securities measured at amortized cost	32	2,887	(2,016)
Net loss on derivatives	33	(523,652)	(720,701)
Net foreign currency transaction gain (loss)	34	(117,464)	314,615
Other operating income (expense), net	35	(1,204,103)	896,337
<b>Non-interest income, net</b>		<b>(468,586)</b>	<b>1,560,602</b>
<b>Provision for (reversal of) credit losses</b>	36	<b>(60,026)</b>	<b>490,070</b>
<b>General and administrative expenses</b>	37	<b>1,016,828</b>	<b>939,949</b>
<b>Operating income</b>		<b>1,334,185</b>	<b>2,621,136</b>
Net gain (loss) related to investments in associates	11	(9,926,416)	753,808
Other non-operating income	38	21,155	21,949
Other non-operating expense	38	(33,258)	(48,854)
<b>Non-operating income (expense), net</b>		<b>(9,938,519)</b>	<b>726,903</b>
<b>Profit (loss) before income taxes</b>		<b>(8,604,334)</b>	<b>3,348,039</b>
<b>Income tax expenses (benefits)</b>	39	<b>(2,050,174)</b>	<b>985,444</b>
<b>Profit (loss) for the year from continuing operations</b>		<b>(6,554,160)</b>	<b>2,362,595</b>
<b>Discontinued operations:</b>			
<b>loss from discontinued operations</b>	16	<b>(1,070,423)</b>	<b>(1,039,126)</b>
<b>Profit (loss) for the year</b>	25 ₩	<b>(7,624,583)</b>	<b>1,323,469</b>

(Profit (loss) for the year adjusted for regulatory reserve for credit losses:  
₩(7,606,352) million and ₩1,553,408 million for the years ended  
December 31, 2022 and 2021, respectively)

(Continued)

Korea Development Bank and Subsidiaries  
Consolidated Statements of Comprehensive Income, Continued  
Years ended December 31, 2022 and 2021

(In millions of won, except earnings per share information)

	Notes	2022	2021
<b>Other comprehensive income (loss) for the year, net of tax</b>	25		
<b>Items that are or may be reclassified subsequently to profit or loss:</b>			
Net loss on securities measured at FVOCI	₩	(1,416,387)	(336,431)
Share of other comprehensive income of associates		633,246	308,471
Exchange differences on translation of foreign operations		401,435	227,988
Valuation gain on cash flow hedge		11,356	98
Net loss on hedges of net investments in foreign operations		(50,089)	(56,620)
Others		28,210	585
		(392,229)	144,091
<b>Items will not be reclassified to profit or loss:</b>			
Remeasurements of defined benefit liabilities		111,606	33,054
Fair value changes on financial liabilities designated at fair value due to credit risk		90,220	6,246
Net gain (loss) on securities measured at FVOCI		(1,509,243)	2,788,857
Share of other comprehensive income of associates		21,801	22,937
		(1,285,616)	2,851,094
		(1,677,845)	2,995,185
<b>Total comprehensive income (loss) for the year</b>	₩	(9,302,428)	4,318,654
<b>Profit (loss) attributable to:</b>			
Owners of the parent	25 ₩	(6,900,726)	1,926,033
Non-controlling interests		(723,857)	(602,564)
Profit (loss) for the year	₩	(7,624,583)	1,323,469
<b>Total comprehensive income (loss) attributable to:</b>			
Owners of the parent	₩	(8,673,789)	4,908,636
Non-controlling interests		(628,639)	(589,982)
Total comprehensive income (loss) for the year	₩	(9,302,428)	4,318,654
<b>Earnings (loss) per share:</b>			
Basic and diluted earnings (loss) per share (in won)	40 ₩	(1,541)	446
<b>Earnings (loss) per share from continuing operations:</b>			
Basic and diluted earnings (loss) per share (in won)	40 ₩	(1,474)	512

See accompanying notes to the consolidated financial statements.

Korea Development Bank and Subsidiaries  
Consolidated Statements of Changes in Equity  
Years ended December 31, 2022 and 2021

(In millions of won)	Attributable to owners of the parent						Non-controlling interests	Total equity
	Issued capital	Capital surplus	Capital adjustment	Accumulated other comprehensive income	Retained earnings	Total		
<b>Balance at January 1, 2021</b>	₩ 20,765,729	1,055,888	278,051	2,053,511	12,347,088	36,500,267	4,489,256	40,989,523
<b>Changes in accounting policy</b>	-	-	-	-	(31,821)	(31,821)	(14,838)	(46,659)
<b>Restated balance at January 1, 2021</b>	20,765,729	1,055,888	278,051	2,053,511	12,315,267	36,468,446	4,474,418	40,942,864
Profit (loss) for the year	-	-	-	-	1,926,033	1,926,033	(602,564)	1,323,469
Net gain (loss) on securities measured at FVOCI	-	-	-	2,421,033	54,172	2,475,205	(22,779)	2,452,426
Share of other comprehensive income (loss) of associates	-	-	-	319,859	4,272	324,131	7,277	331,408
Exchange differences on translation of foreign operations	-	-	-	199,154	-	199,154	28,834	227,988
Valuation gain (loss) on cash flow hedge	-	-	-	270	-	270	(172)	98
Net loss on hedges of net investments in foreign operations	-	-	-	(56,620)	-	(56,620)	-	(56,620)
Remeasurements of defined benefit liabilities	-	-	-	34,169	-	34,169	(1,115)	33,054
Fair value changes on financial liabilities designated at fair value due to credit risk	-	-	-	6,246	-	6,246	-	6,246
Others	-	-	-	48	-	48	537	585
<b>Total comprehensive income (loss) for the year</b>	-	-	-	2,924,159	1,984,477	4,908,636	(589,982)	4,318,654
Dividends	-	-	-	-	(209,638)	(209,638)	-	(209,638)
Paid-in capital increase	1,120,830	(5,388)	-	-	-	1,115,442	-	1,115,442
Acquisition on / disposal of interest in subsidiaries while maintain control	-	(291,940)	341	-	-	(291,599)	282,454	(9,145)
<b>Transaction with owners</b>	1,120,830	(297,328)	341	-	(209,638)	614,205	282,454	896,659
<b>Balance at December 31, 2021</b>	₩ 21,886,559	758,560	278,392	4,977,670	14,090,106	41,991,287	4,166,890	46,158,177
<b>Balance at January 1, 2022</b>	₩ 21,886,559	758,560	278,392	4,977,670	14,090,106	41,991,287	4,166,890	46,158,177
<b>Changes in accounting policy</b>	-	-	-	-	(853)	(853)	-	(853)
<b>Restated balance at January 1, 2022</b>	21,886,559	758,560	278,392	4,977,670	14,089,253	41,990,434	4,166,890	46,157,324
Loss for the year	-	-	-	-	(6,900,726)	(6,900,726)	(723,857)	(7,624,583)
Net gain (loss) on securities measured at FVOCI	-	-	-	(3,019,304)	193,307	(2,825,997)	(99,633)	(2,925,630)
Share of other comprehensive income (loss) of associates	-	-	-	649,161	3,615	652,776	2,271	655,047
Exchange differences on translation of foreign operations	-	-	-	269,299	-	269,299	132,136	401,435
Valuation gain on cash flow hedge	-	-	-	10,344	-	10,344	1,012	11,356
Net loss on hedges of net investments in foreign operations	-	-	-	(50,089)	-	(50,089)	-	(50,089)
Remeasurements of defined benefit liabilities	-	-	-	80,387	-	80,387	31,219	111,606
Fair value changes on financial liabilities designated at fair value due to credit risk	-	-	-	90,220	-	90,220	-	90,220
Others	-	-	-	(3)	-	(3)	28,213	28,210
<b>Total comprehensive loss for the year</b>	-	-	-	(1,969,985)	(6,703,804)	(8,673,789)	(628,639)	(9,302,428)
Dividends	-	-	-	-	(833,089)	(833,089)	-	(833,089)
Paid-in capital increase	1,265,000	(3,700)	-	-	-	1,261,300	-	1,261,300
Acquisition on / disposal of interest in subsidiaries while maintain control	-	156,728	(3,935)	-	-	152,793	(1,545,136)	(1,392,343)
<b>Transaction with owners</b>	1,265,000	153,028	(3,935)	-	(833,089)	581,004	(1,545,136)	(964,132)
<b>Balance at December 31, 2022</b>	₩ 23,151,559	911,588	274,457	3,007,685	6,552,360	33,897,649	1,993,115	35,890,764

See accompanying notes to the consolidated financial statements.

**Korea Development Bank and Subsidiaries**  
**Consolidated Statements of Cash Flows**  
**Years ended December 31, 2022 and 2021**

(In millions of won)

	<b>2022</b>	<b>2021</b>
<b>Cash flows from operating activities</b>		
Profit (loss) for the year	₩ (7,624,583)	1,323,469
Adjustments for:		
Income tax expenses (benefits)	(2,118,857)	1,245,542
Interest income	(8,128,647)	(4,613,031)
Interest expense	5,369,074	2,627,509
Dividend income	(479,813)	(304,628)
Gain on valuation of securities measured at FVTPL	(65,155)	(147,807)
Gain on valuation of financial instruments designated at fair value through profit or loss	(465,099)	(149,880)
Net loss on securities measured at FVOCI	72,828	30,408
Net loss on securities measured at amortized cost	7,875	2,368
Loss (gain) on valuation of loans measured at FVTPL	78,884	(1,895,878)
Loss on valuation of derivatives	2,342,332	1,496,048
Net gain on fair value hedged items	(1,494,136)	(481,882)
Loss (gain) on foreign exchange translation	131,296	(17,175)
Loss on disposal of investments in associates	70,631	288,009
Impairment loss on investments in associates	3,788,103	47,066
Share of loss (gain) of associates	6,126,637	(742,839)
Provision for loan losses allowance	522,344	623,039
Reversal of provision for due from banks	(76)	-
Increase (reversal) of provision for payment guarantees	183,010	(77,763)
Reversal of provision for unused commitments	(64,310)	(13,986)
Reversal of provision for financial guarantee provision	(13,588)	(5,970)
Increase (reversal) of lawsuit provision	(1,550)	1,611
Reversal of provision for restoration	(2,007)	(1,820)
Increase (reversal) of other provisions	(44,111)	115,432
Reversal of provision for other assets	(687,406)	(33,167)
Defined benefit costs	136,849	47,904
Depreciation of property and equipment	101,199	254,061
Net loss on property and equipment	60,394	15,033
Depreciation of investment property	6,321	4,495
Net loss on investment property	(7,861)	(18,396)
Amortization of intangible assets	61,387	63,309
Net loss on intangible assets	848	5,514
Net gain on assets held for sale	(3,147)	(41,657)
Net loss on share capital repayable on demand	265,582	52,509
Gain on redemption of debentures	(4)	-
	<u>5,749,827</u>	<u>(1,626,022)</u>
Changes in operating assets and liabilities:		
Due from banks	433,739	(4,312,849)
Securities measured at FVTPL	200,403	(121,145)
Loans measured at FVTPL	22,909	27,981
Loans measured at amortized cost	(24,889,717)	(17,172,462)
Derivative financial instruments	427,269	(113,582)
Other assets	(3,128,124)	2,847,450
Financial liabilities designated at FVTPL	(6,956)	290,136
Deposits	16,394,008	6,817,787
Policy reserves	334,584	493,619
Defined benefit liabilities	14,275	(242,278)
Provisions	(278,547)	(393,385)
Other liabilities	(974,126)	4,112,111
	<u>(11,450,283)</u>	<u>(7,766,617)</u>
Income taxes refund (paid)	(308,995)	174,826
Interest received	7,311,298	4,549,130
Interest paid	(5,123,147)	(3,591,718)
Dividends received	798,540	1,211,484
<b>Net cash used in operating activities</b>	<u>₩ (10,647,343)</u>	<u>(5,725,448)</u>

(Continued)

**Korea Development Bank and Subsidiaries**  
**Consolidated Statements of Cash Flows, Continued**  
**Years ended December 31, 2022 and 2021**

(In millions of won)

	<b>2022</b>	<b>2021</b>
<b>Cash flows from investing activities</b>		
Net, increase in securities measured at FVTPL	₩ (2,866,923)	(1,641,098)
Disposal of securities measured at FVOCI	13,771,268	36,618,591
Acquisition of securities measured at FVOCI	(15,488,624)	(37,441,512)
Redemption of securities measured at amortized cost	1,933,660	1,111,166
Acquisition of securities measured at amortized cost	(4,933,576)	(4,794,058)
Disposal of property and equipment	7,718	19,059
Acquisition of property and equipment	(174,891)	(199,353)
Disposal of investment property	-	37,150
Acquisition of investment property	(70)	(6,841)
Disposal of intangible assets	2,301	18,971
Acquisition of intangible assets	(65,094)	(31,339)
Disposal of assets and liabilities held for sale	165,000	248,176
Disposal of investment in associates	240,318	434,308
Acquisition of investments in associates	(820,423)	(957,467)
Net cash flows by the change of subsidiaries	669,547	(140,585)
<b>Net cash used in investing activities</b>	(7,559,789)	(6,724,832)
<b>Cash flows from financing activities</b>		
Increase in financial liabilities designated at FVTPL	125,000	319,690
Decrease in financial liabilities designated at FVTPL	(128,350)	(79,144)
Proceeds from borrowings	50,909,515	49,158,318
Repayment of borrowings	(47,618,865)	(43,418,267)
Proceeds from issuance of debentures	136,754,674	119,688,259
Repayment of debentures	(121,075,245)	(112,262,075)
Repayment of lease liabilities	(65,199)	(124,324)
Paid-in capital increase	696,300	1,115,442
Dividends paid	(833,089)	(209,638)
Decrease of non-controlling interests	189,309	(93,879)
<b>Net cash provided by financing activities</b>	18,954,050	14,094,382
<b>Effects from changes in foreign currency exchange rate for cash and cash equivalents held</b>	159,429	294,950
<b>Net increase in cash and cash equivalents</b>	906,347	1,939,052
<b>Cash and cash equivalents included in assets held for sale</b>	2,332,595	(3,135,528)
<b>Cash and cash equivalents at beginning of the year</b>	10,025,661	11,222,137
<b>Cash and cash equivalents at end of the year</b>	₩ 13,264,603	10,025,661

See accompanying notes to the consolidated financial statements.

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021

1. **Reporting Entity**

The accompanying consolidated financial statements comprise Korea Development Bank (“KDB” or the “Bank”) and its subsidiaries (collectively the “Group”). General information of the Bank and its subsidiaries is stated below.

**(1) Controlling company**

KDB was established on April 1, 1954, in accordance with *the Korea Development Bank Act* to finance and manage major industrial projects, in order to expedite industrial development and enhance the national economy.

The Bank is engaged in the banking industry under *the Korea Development Bank Act* and other applicable statutes, and in the fiduciary in accordance with *the Financial Investment Services and Capital Markets Act*.

Korea Finance Corporation (KoFC), the former ultimate parent company, and KDB Financial Group Inc. (KDBFG), the former immediate parent company, were established by spin-offs of divisions of the Bank as of October 28, 2009. KoFC and KDBFG were merged into the Bank, effective as of December 31, 2014. Issued capital is ₩23,151,559 million with 4,630,311,768 shares of issued and outstanding as of December 31, 2022 and the government of the Republic of Korea owns 100% of the Bank’s shares.

The Bank’s head office is located in 14, Eunhaeng-ro, Yeouido-dong, Yeongdeungpo-gu, Seoul and its service network as of December 31, 2022, is as follows:

	Domestic		Overseas		Representative offices	Total
	Head Office	Branches	Branches	Subsidiaries		
KDB	1	60	11	7	7	86

**(2) Consolidated subsidiaries**

The Group’s equity ownership in its consolidated direct and indirect subsidiaries as of December 31, 2022 and 2021 are summarized as follows:

Investor	Investee	Country	Industry	Fiscal year end	Ownership (%)	
					2022	2021
KDB	<b>Subsidiaries:</b>					
	KDB Asia (HK) Ltd.	Hong Kong	Finance	December	100.00	100.00
	KDB Ireland Ltd.	Ireland	Finance	December	100.00	100.00
	KDB Bank Uzbekistan Ltd.	Uzbekistan	Finance	December	86.32	86.32
	KDB Bank Europe Ltd.	Hungary	Finance	December	100.00	100.00
	Banco KDB Do Brazil S. A.	Brazil	Finance	December	100.00	100.00
	PT KDB Tifa Finance Tbk	Indonesia	Finance	December	84.65	84.65
	KDB Silicon Valley LLC	USA	Finance	December	100.00	100.00
	KDB OCCASIO II, L.P.	Cayman Islands	Finance	December	100.00	-
	KDB Synergy, L.P.	Cayman Islands	Finance	December	100.00	-
	KDB Capital Corporation	Korea	Specialized Credit Finance	December	99.92	99.92
	KDB Biz Co., Ltd.	Korea	Service	December	100.00	100.00
	KDB Investment Co., Ltd.	Korea	Financial investment	December	100.00	100.00
	KDB Infrastructure Investment Asset Management Co., Ltd.	Korea	Asset management	December	84.16	84.16
	Daewoo Shipbuilding & Marine Engineering Co., Ltd. (*1)	Korea	Manufacturing	December	55.68	55.68
	Samwoo Heavy Industry Co., Ltd. (*2) (*5)	Korea	Ship parts manufacturing	December	100.00	100.00
	Daehan Shipbuilding Co., Ltd. (*9)	Korea	Manufacturing	December	-	70.04
	Korea Education Fund (*3)	Korea	Financial investment	Half- yearly	50.00	50.00
	Korea BTL Fund I (*3)	Korea	Financial investment	Half- yearly	41.67	41.67

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021

1. **Reporting Entity, Continued**

Investor	Investee	Country	Industry	Fiscal year end	Ownership (%)	
					2022	2021
KDB	Korea Railroad Fund I (*3)	Korea	Financial investment	Half-yearly	50.00	50.00
	Principals and interests guaranteed trusts (*4)	Korea	Financial investment	December	-	-
	Principals guaranteed trusts (*4)	Korea	Financial investment	December	-	-
	KDB Consus Value Private Equity Fund	Korea	Financial investment	December	68.20	68.20
	Components & Materials M&A Private Equity Fund (*9)	Korea	Financial investment	December	-	83.33
	KDB Investment PEF NO.1 (*9)	Korea	Financial investment	December	-	99.70
	KDB Sigma Private Equity Fund II (*9)	Korea	Financial investment	December	-	73.33
	KDB Asia Private Equity Fund (*5)	Korea	Financial investment	December	65.00	65.00
	KDB-IAP OBOR Private Equity Fund (*5) (*7)	Korea	Financial investment	December	44.69	44.69
	KDB Small Medium Mezzanine PEF (*5)	Korea	Financial investment	December	73.34	73.34
	Green Initiative 2nd Private Equity Fund (*5)	Korea	Financial investment	December	42.25	-
	Corporate Liquidity Assistance Agency Co., Ltd.	Korea	Financial investment	December	100.00	100.00
	K-Five 9th Securitization Specialty Co., Ltd. and 11 others (*6)	Korea	Financial investment	December	-	-
	KIAMCO Road Investment Private Fund Special Asset Trust 2 and 17 beneficiary certificates	Korea	Financial investment	December	-	-
	<b>Sub-subsidiaries:</b>					
	KDB Capital Corporation	Vietnam	Finance	December	81.65	81.65
	Special money trust of Apache Golf Bond with Warrant	Korea	Financial investment	December	100.00	100.00
	Fine Infrastructure No.4 (*9)	Korea	Financial investment	December	-	99.34
	Tiger Alternative Specialized Investment Trust No.21	Korea	Financial investment	December	98.67	98.67
	YK Bluesky No.1 (*6)	Korea	Financial investment	December	-	-
	KDBC Synergy Mezzanine New Tech Fund No.1	Korea	Financial investment	December	90.50	90.50
	KDBC Co-investment Private Equity Fund (*5)	Korea	Financial investment	December	95.00	-

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021

1. **Reporting Entity, Continued**

Investor	Investee	Country	Industry	Fiscal year end	Ownership (%)	
					2022	2021
Daewoo Shipbuilding & Marine Engineering Co., Ltd. (*1)	DSME Shangdong Co., Ltd.	China	Parts of watercraft manufacturing	December	100.00	100.00
	Sam Woo Heavy Industries Co., Ltd. (*2) (*5)		Parts of watercraft manufacturing	December	-	-
	DK Maritime S. A.	Korea	Shipping industry	December	-	-
	DSME Information Consulting Co., Ltd.	Panama	IT Service	December	100.00	100.00
	DSME Kazakhstan LLP	Korea	Ship repairing	December	100.00	100.00
KDB Consus Value Private Equity Fund	KDB Life Insurance Co., Ltd. (*1) (*8)	Kazakhstan		December	100.00	100.00
KDB Investment PEF No.1	Daewoo Engineering & Construction Co., Ltd. (*8) (*9)	Korea	Finance	December	92.73	92.73
KDB Investment Co., Ltd.	KDB INVESTMENT PRIVATE EQUITY FUND NO.2 (*5) (*7)	Korea	Construction	December	-	51.34
	KDB Investment Global Healthcare Private Equity Fund I (*5) (*7)	Korea	Financial investment	December	14.32	14.32
		Korea	Financial investment	December	45.52	-

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021

**1. Reporting Entity, Continued**

- (\*1) The Group reclassified the disposal group of Daewoo Shipbuilding & Marine Engineering Co., Ltd. to assets held for sale as described in Note 16. The disposal group related to KDB Life Insurance Co., Ltd. was excluded from assets held for sale.
- (\*2) The Group consolidates directly the investee which was a subsidiary of Daewoo Shipbuilding & Marine Engineering Co., Ltd., because it has power over the investee to control the financial and operating policies of the entity as a principal creditor bank for the subsidiary.
- (\*3) The investees are financed by the Bank and managed by KDB Infrastructure Investment Asset Management Co., Ltd. They are included in the scope of consolidation even though the Group holds less than half of the voting rights because the Group is exposed to variable returns, and has the ability to affect those returns through its power over the investee.
- (\*4) The trusts are included in the scope of consolidation because the Group has power over the trusts to control the financial and operating policies of the entity, and is exposed to variable returns through the contract for preservation of principal and interest or principal only.
- (\*5) Indirect ownership through subsidiaries is included.
- (\*6) The investees are established for the investor's business, or are structured entities that the investor has rights to obtain the majority of the benefits of the investee or retains the majority of the risks related to the investee. The investees are included in the scope of consolidation because the investor has power over the investees to control the financial and operating policies of the entity, exposure or rights to variable returns from its involvement with the investees and the ability to use its power over the investees to affect those returns.
- (\*7) Those entities have been consolidated even though the investor's ownership is not over 50%, because the investor, as an executive partner, has power over the investees to control the financial and operating policies of the entity, exposure or rights to variable returns from its involvement with the investees and the ability to use its power over the investees to affect those returns.
- (\*8) The parent company of the sub-subsidiary is a SPE, which is not separately disclosed in the consolidated financial statements.
- (\*9) The investee is excluded from the scope of consolidation as of December 31, 2022 due to liquidation. The reasons for the exclusion of subsidiaries of Daewoo Engineering & Construction Co., Ltd. and Daehan Shipbuilding Co., Ltd. are explained in Note 16.

**(3) Changes in subsidiaries**

Subsidiaries that are newly included in the consolidated financial statements and those that are excluded from the consolidated financial statements as of December 31, 2022 are as follows:

(i) Subsidiaries newly included in scope of consolidation as of December 31, 2022

Reason	Subsidiaries
New investment	KDB Occasio II, L.P., KDB Synergy, L.P., KIAMCO Data Center Blind Fund, Green Initiative 2nd Private Equity Fund, KDB Investment Global Healthcare Private Equity Fund I, KDBC Co-investment Private Equity Fund
Credit facilities or purchase agreements for ABCP	KDB ESG 4TH INC., ENMKDB 1ST INC., KDB ESG 5TH INC., KDB ESG 6TH INC., PROPERTY KDB 1ST INC.

(ii) Subsidiaries excluded from scope of consolidation as of December 31, 2022

Reason	Subsidiaries
Liquidation, etc.	U-BEST 5th Securitization Specialty Co., Ltd., K-Five 8th Securitization Specialty Co., Ltd., KDB Sigma Private Equity Fund II, KDB Investment PEF No.1, Components & Materials M&A Private Equity Fund, Multi Asset Bandi LED Privat Stock Investment Trust 1, Multi Asset Green Car Private Securities Investment, Global Partnership Private Securities Investment Trust I, Global Partnership Private Securities Investment Trust II, Global Partnership Private Securities Investment Trust III
Reclassification to securities measured at FVOCI	Daehan Shipbuilding Co., Ltd.

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021  
(In millions of won)

1. **Reporting Entity, Continued**

**(4) Financial information of subsidiaries**

Financial information of subsidiaries included in the consolidated financial statements as of and for the years ended December 31, 2022 and 2021 are as follows:

	2022					
	Assets	Liabilities	Equity	Operating revenue	Net profit (loss)	Total comprehensive income (loss)
KDB Asia (HK) Ltd.	₩ 3,660,944	3,029,336	631,608	218,171	53,881	75,373
KDB Ireland Ltd.	985,414	861,265	124,149	54,874	7,036	11,258
KDB Bank Uzbekistan Ltd.	981,301	874,872	106,429	55,269	25,765	23,614
KDB Bank Europe Ltd.	1,197,124	1,082,057	115,067	101,071	7,415	(4,360)
Banco KDB Do Brazil S. A.	481,207	386,159	95,048	84,252	27,132	33,709
PT KDB Tifa Finance Tbk	130,098	41,343	88,755	13,738	5,284	2,639
KDB Silicon Valley LLC	126,606	1,522	125,084	2,237	(1,055)	7,105
KDB OCCASIO II, L.P.	60,554	49,495	11,059	20	(16,446)	(15,908)
KDB Synergy, L.P.	19,643	-	19,643	-	(596)	(328)
KDB Capital Corporation	8,792,535	7,427,546	1,364,989	542,270	135,968	136,090
KDB Infrastructure Investment Asset Management Co., Ltd.	70,706	10,403	60,303	39,151	19,057	19,104
KDB Biz Co., Ltd.	6,899	3,238	3,661	26,291	325	624
KDB Investment Co., Ltd.	152,004	19,866	132,138	84,468	54,032	54,034
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	12,235,665	11,490,693	744,972	5,805,906	(1,744,778)	(1,472,612)
Samwoo Heavy Industry Co., Ltd.	268,614	264,893	3,721	121,249	(10,237)	(9,681)
Korea Education Fund	95,445	7	95,438	9,675	9,442	9,442
Korea BTL Fund I	329,286	215	329,071	14,607	11,773	11,773
Korea Railroad Fund I	158,318	9	158,309	7,492	(3,569)	(3,569)
Principals and interests guaranteed trusts	229,553	227,911	1,642	5,335	(2,967)	(2,967)
Principals guaranteed trusts	231,518	224,916	6,602	6,142	44	44
KDB Consus Value Private Equity Fund	18,595,875	19,958,869	(1,362,994)	4,379,434	429,868	(1,315,065)
KDB Asia Private Equity Fund	194,389	172	194,217	1	(494)	20,532
KDB-IAP OBOR Private Equity Fund	58,878	60,084	(1,206)	-	(1,024)	(1,017)
KDB Small Medium Mezzanine PEF	96,666	122	96,544	4,620	3,432	3,432
Green Initiative 2nd Private Equity Fund	190,404	5,316	185,088	2	(5,795)	(5,795)
KDBC Co-investment Private Equity Fund	17,522	27	17,495	-	(544)	(544)
Corporate Liquidity Assistance Agency Co., Ltd.	3,280,515	2,215,553	1,064,962	90,631	32,625	32,625
K-Five 9th Securitization Specialty Co., Ltd. and 11 others	1,197,829	1,328,029	(130,200)	35,074	(9,819)	(8,690)
KIAMCO Road Investment Private Fund Special Asset Trust 2 and 17 beneficiary certificates	2,342,807	376,995	1,965,812	255,976	203,680	206,279

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021  
(In millions of won)

1. **Reporting Entity, Continued**

	2021					
	Assets	Liabilities	Equity	Operating revenue	Net profit (loss)	Total comprehensive income (loss)
KDB Asia (HK) Ltd.	₩ 3,958,732	3,402,497	556,235	130,854	42,651	84,868
KDB Ireland Ltd.	698,808	585,918	112,890	22,318	5,156	13,790
KDB Bank Uzbekistan Ltd.	838,100	755,286	82,814	28,400	10,340	16,928
KDB Bank Europe Ltd.	1,113,228	993,801	119,427	46,211	4,333	8,031
Banco KDB Do Brazil S. A.	369,396	308,057	61,339	49,441	1,649	2,773
PT KDB Tifa Finance Tbk	116,553	30,437	86,116	9,137	169	2,657
KDB Silicon Valley LLC	119,648	1,669	117,979	24	(552)	(552)
KDB Capital Corporation	7,513,809	6,217,165	1,296,644	555,801	232,376	183,742
KDB Infrastructure Investment Asset Management Co., Ltd.	68,612	11,373	57,239	37,483	18,851	18,936
KDB Biz Co., Ltd.	7,478	4,441	3,037	25,580	260	737
KDB Investment Co., Ltd.	81,468	2,687	78,781	10,535	4,084	4,177
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	10,623,210	8,405,627	2,217,583	4,486,586	(1,699,829)	(1,650,289)
Samwoo Heavy Industry Co., Ltd.	253,430	240,028	13,402	87,589	(9,176)	(8,939)
Daehan Shipbuilding Co., Ltd.	701,881	991,844	(289,963)	763,270	(136,391)	(135,624)
Korea Education Fund	98,376	6	98,370	3,877	2,039	2,039
Korea BTL Fund I	361,684	237	361,447	12,709	10,819	10,819
Korea Railroad Fund I	178,399	110	178,289	7,172	3,806	3,806
Principals and interests guaranteed trusts	238,144	233,534	4,610	5,944	(70,119)	(70,119)
Principals guaranteed trusts	243,459	236,901	6,558	4,522	242	242
KDB Consus Value Private Equity Fund	19,680,738	19,633,413	47,325	5	14,301	(385,890)
Components & Materials M&A Private Equity Fund	793	25	768	2	(15,695)	(15,695)
KDB Investment PEF No.1	11,017,597	8,043,123	2,974,474	-	205,231	232,737
KDB Sigma Private Equity Fund II	629	12	617	39	(2,314)	(2,314)
KDB Asia Private Equity Fund	130,757	102	130,655	-	(2,669)	11,441
KDB-IAP OBOR Private Equity Fund	55,046	55,235	(189)	-	(74,212)	(70,569)
KDB Small Medium Mezzanine PEF	105,256	144	105,112	81,216	69,808	70,597
Corporate Liquidity Assistance Agency Co., Ltd.	3,947,608	2,915,271	1,032,337	83,857	29,628	29,628
K-Five 9th Securitization Specialty Co., Ltd. and 8 others	724,085	845,498	(121,413)	16,367	(8,138)	(8,138)
KIAMCO Road Investment Private Fund Special Asset Trust 2 and 21 beneficiary certificates	2,170,320	1,489	2,168,831	223,781	188,381	191,661

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
December 31, 2022 and 2021

2. **Basis of Preparation**

**(1) Application of accounting standards**

These consolidated financial statements have been prepared in accordance with the Korean International Financial Reporting Standards (K-IFRS) enacted by the *Act on External Audit of Stock Companies*.

**(2) Changes and disclosures of accounting policies**

***(i) New and amended standards and interpretations adopted***

The Group newly applied the following amended and enacted standards for the annual period beginning on January 1, 2022. The nature and the impact of each new standard or amendment are described below:

*Amendments to K-IFRS 1116 'Lease' - Covid-19-Related Rent Concessions etc. beyond June 30, 2021*

The application of the practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before 30 June 2022. A lessee shall apply the practical expedient consistently to eligible contracts with similar characteristics and in similar circumstances. The amendment does not have a significant impact on the consolidated financial statements.

*Amendments to K-IFRS 1103 'Business Combination' – Reference to the Conceptual Framework*

The amendments update a reference of definition of assets and liabilities to qualify for recognition in revised Conceptual Framework for Financial Reporting. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of K-IFRS 1037 'Provisions, Contingent Liabilities and Contingent Assets', and K-IFRS 2121 'Levies'. The amendments also confirm that contingent assets should not be recognized at the acquisition date. The amendment does not have a significant impact on the consolidated financial statements.

*Amendments to K-IFRS 1016 'Property, Plant and Equipment' - Proceeds before intended use*

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize and disclose the proceeds from selling such items, and the costs of producing those items, as profit or loss. The amendment does not have a significant impact on the consolidated financial statements.

*Amendments to K-IFRS 1037 'Provisions, Contingent Liabilities and Contingent Assets' – Onerous Contracts: Cost of Fulfilling a Contract*

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendment does not have a significant impact on the consolidated financial statements.

*Annual improvements to K-IFRS 2018-2020*

The amendment does not have a significant impact on the consolidated financial statements.

- K-IFRS 1101 'First time Adoption of Korean International Financial Reporting Standards' – Subsidiaries that are first-time adopters
- K-IFRS 1109 'Financial Instruments' – Fees related to the 10% test for derecognition of financial liabilities  
The amendment clarifies that in applying the '10 per cent' test to assess whether to derecognise a financial liability, an entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.
- K-IFRS 1116 'Leases' – Lease incentives
- K-IFRS 1041 'Agriculture' – Measuring fair value

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2. **Basis of Preparation, Continued**

*(ii) Change of accounting policies*

The Group has changed the following accounting policy for its annual reporting period commencing January 1, 2022.

The Group had classified due from banks with restriction to use, such as reserve requirement deposits, as due from banks measured at amortized cost rather than cash and cash equivalents; however, following the IFRS Interpretations Committee's decision that cash and cash equivalents include restricted demand deposits, some classified due from financial institutions with restriction to use, such as reserve requirement deposits, the Group has retrospectively classified these accounts as cash and cash equivalents from January 1, 2022. The comparative consolidated financial statements have been restated to reflect the changes made to retrospective application.

The application of these accounting policy changes has no effect on the consolidated statements of financial position as of December 31, 2022 and 2021, and the consolidated statements of comprehensive income for the years ended December 31, 2022 and 2021.

The effects on the consolidated statements of cash flows for the years ended December 31, 2022 and 2021, are as follows:

<Increase (decrease) by cash flow statement line item>

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Increase (decrease) in due from banks	₩ (3,219,178)	1,316,120
Increase in effects from changes in foreign currency exchange rate for cash and cash equivalents held	13,560	18,438
Increase in cash and cash equivalents at beginning of the year	4,387,441	3,052,883
Increase in cash and cash equivalents at end of the year	1,181,823	4,387,441

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2. Basis of Preparation, Continued

*(iii) New standards and interpretations issued but not effective*

The following new standards, interpretations and amendments to existing standards have been issued but not effective for annual periods beginning after January 1, 2022, and the Group has not early adopted them. The nature and the impact of each new standard, amendment and enactments are described below:

*Amendments to K-IFRS 1001 'Presentation of Financial Statements' - Classification of Liabilities as Current or Non-current*

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the management's expectations thereof. Also, the settlement of liability includes the transfer of the entity's own equity instruments; however, it would be excluded if an option to settle the liability by the transfer of the entity's own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the consolidated financial statements.

*Amendments to Korean IFRS No.1001 Presentation of Financial Statements*

The amendments require an entity to define and disclose their material accounting policy information. IFRS Practice Statement 2 Making Materiality Judgements was amended to explain and demonstrate how to apply the concept of materiality. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated financial statements.

*Amendments to Korean IFRS No.1008 Accounting Policies, Changes in Accounting Estimates and Errors*

The amendments introduce the definition of accounting estimates and clarify how to distinguish changes in accounting estimates from changes in accounting policies. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated financial statements.

*Amendments to Korean IFRS No.1012 Income Taxes – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction*

The amendments narrow the scope of the deferred tax recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated financial statements.

*Issuance of K-IFRS 1117 Insurance Contracts*

K-IFRS 1117 Insurance Contracts will replace K-IFRS 1104 Insurance Contracts. This standard should be applied for annual reporting periods beginning on or after January 1, 2023.

① Major changes in accounting policy

This standard requires an entity to estimate future cash flows of an insurance contract and measure insurance liabilities using discount rates applied with assumptions and risks at the measurement date and recognize insurance revenue on an accrual basis including services provided to the policyholder by each annual reporting period. In addition, investment components (refunds due to termination and maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and net insurance income and net investment income are presented separately to enable users of the information to understand the sources of net income.

If the Group prepares consolidated financial statements by applying K-IFRS 1117, the following parts are expected to make significant differences with the current consolidated financial statements. It does not mean to include all differences that are arising in the future and can be changed based on the future additional analysis results.

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**2. Basis of Preparation, Continued**

i) Measurement of Insurance liabilities

Under K-IFRS 1117, the Group estimates all cash flows from insurance contracts and measures the insurance liabilities using discount rate that reflects assumptions and risks at the reporting date. In details, the Group identifies a portfolio of insurance contracts that comprises contracts exposed to similar risks and managed together, then separates the contracts with similar profitability within the portfolio as groups of insurance contracts. The groups of insurance contracts are measured as the sum of the estimate of future cash flows (including cash flows related to policy loans and reflecting time value of money, etc.), risk adjustment, and the contractual service margin. With the adoption of K-IFRS 1117, account of the contractual service margin will be introduced, which means unearned profit that would be recognized by providing insurance service in the future.

Meanwhile, reinsurance contracts mean insurance contracts issued by a reinsurance company to compensate claims arising from original insurance contracts issued by other insurance companies. The groups of insurance contracts also apply assumptions consistent with the groups of original insurance contracts when estimating the present value of future cash flows for the groups of insurance contracts ceded.

ii) Recognition and measurement of financial performance

Under K-IFRS 1117, the Group recognizes insurance revenue on an accrual basis for services (insurance coverage) provided to the policyholder by each annual reporting period, excluding investment component (refunds due to termination and maturity) to be paid to the policyholder regardless of the insured event. In addition, net insurance income and net investment income are presented separately to enable users of the information to understand the sources of net income.

The Group also includes the time value of money, financial risk and effects of their fluctuations related to the group of insurance contracts and the Group should select accounting policy whether the insurance finance income or expenses for the periods are divided to profit or loss, or other comprehensive income.

iii) Accounting policy for transition of insurance contracts

Under transition requirements of K-IFRS 1117, the Group shall adjust the original cost-based measurement to current measurement by applying the fully retrospective approach, modified retrospective approach or fair value approach, for the group of insurance contracts issued before the transition date (the beginning of the annual reporting period immediately preceding initial application date of January 1, 2022).

In principle, the Group shall identify, recognize and measure each group of insurance contracts as if K-IFRS 1117 had always applied before the transition date. If this method is impracticable, the Group can apply the modified retrospective approach or the fair value approach. However, the fair value approach can be applied even though it is possible to apply the fully retrospective approach for the group of insurance contracts with direct participation features that meet specific requirements.

Meanwhile, the modified retrospective approach is a way to obtain results very close to the fully retrospective approach by using all reasonable and supportable information available without undue cost or effort. The fair value approach is a way to measure group of insurance contracts using fair value measurements based on KIFRS 1113 'Fair Value Measurements'. When applying the fair value approach, contractual service margin or loss component of the liability for remaining coverage at the transition date are measured as the difference between the fair value of a group of insurance contracts at that date and the fulfilment cash flows measured at that date.

Meanwhile, the cost-based valuation was adjusted to the current valuation by applying the fair value approach for the entire period to the set of insurance contracts issued before the conversion date.

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2. **Basis of Preparation, Continued**

	K-IFRS 1104	K-IFRS 1117
Insurance liability measurement	Measure at cost using the past information	<ul style="list-style-type: none"> <li>- Measure at current value using information at the reporting date</li> <li>- Evaluation model: Building block approach, Variable fee approach, Premium allocation approach</li> <li>- Applying the fair value approach as a conversion method for past group of insurance contracts</li> </ul>
Recognition of insurance revenue	Apply cash basis to recognize the received premium as insurance revenue	<ul style="list-style-type: none"> <li>- Recognize revenue by reflecting services provided to the policyholder (accrual basis)</li> </ul>

② Status of preparation for K-IFRS 1117 adoption

In order for the Group to smoothly adopt K-IFRS 1117, it is necessary to prepare a separate implementation department, implement an accounting system, train executives and employees, and analyze financial impact and etc. Above all, for the adequacy of insurance liability evaluation, the stability of the accounting system and the conformity of system calculations must be secured, and accounting policies and actuarial assumptions must be established reasonably and applied consistently every period. For this, the Group needs to verify the system continually, and prepare various internal control procedures.

The detailed preparations for adoption and future plans are as follows:

Key activity	Progress (at the reporting date)	Future plan
Implementation department	Progress works in relation to transition to new accounting standard (Currently, total 21 personnel who are fully in charge)	Supplement personnel who are fully in charge of, etc.
Implementation of accounting system	System operations and stabilization	Implementation of internal control over financial reporting
Training for executives and employees	Training for executives and employees in related departments	Continuation of the training courses for practitioners
Reporting to management	Report implementation of the system and financial effects	Reporting financial impact analysis after adoption

③ Financial effect evaluation

If the Group applies K-IFRS 1117 to insurance liabilities as of December 31, 2022, the insurance contract liabilities are expected to be ₩ 15,695,586 million.

The estimated composition of applicable the insurance contract assets and the insurance contract liabilities under K-IFRS 1117 is as below:

	₩	Assets under K- IFRS 1117
Insurance contract assets		-
Contractual service margin		-
Reinsurance contract assets		-
Contractual service margin on reinsurance contract		-
	₩	Liabilities under K- IFRS 1117
Insurance contract liabilities		15,669,495
Contractual service margin		523,940
Reinsurance contract liabilities		26,091
Contractual service margin on reinsurance contract		5,909
	₩	15,695,586

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2. **Basis of Preparation, Continued**

**(3) Basis of measurement**

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statement of financial position:

- Derivative financial instruments measured at fair value
- Financial instruments measured at fair value through profit or loss
- Available-for-sale financial instruments measured at fair value
- Fair value hedged financial instruments with changes in fair value, due to hedged risks, recognized in profit or loss
- Liabilities for defined benefit plans, which are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets

**(4) Functional and presentation currency**

In preparing the Group's consolidated financial statements, transactions in foreign currencies are initially recorded by the Group entities at their respective functional currency rates prevailing at the date of the transaction. The Group's consolidated financial statements are presented in Korean won, which is also the Group's functional currency. The following entities of the Group have different functional currency from the presentation currency:

Functional currency	Subsidiaries
USD	KDB Asia(HK) Ltd. KDB Ireland Ltd. KDB Asia Private Equity Fund KDB-IAP OBOR Private Equity Fund Multi-Asset KDB Shipping Private Fund DA-3 Multi-Asset KDB Ocean Value-up Private Fund 6th KDB Silicon Valley LLC KDB Occasio II, L.P. KDB Synergy, L.P.
UZS	KDB Bank Uzbekistan Ltd.
HUF	KDB Bank Europe Ltd.
BRL	Banco KDB Do Brazil S. A.
IDR	PT KDB Tifa Finance Tbk

**2. Basis of Preparation, Continued**

**(5) Use of estimates and judgments**

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Management's estimates may differ from actual outcomes if management's estimates and assumptions based on management's best judgment at the reporting date are different from the actual environment.

Estimates and underlying assumptions are evaluated on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future years affected.

The following are the key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

**(i) *Fair value of financial instruments***

Financial instruments measured at fair value through profit or loss and other comprehensive income, and derivative instruments are recognized and measured at fair value. If the market for a financial instrument is not active, fair value is determined either by using a valuation technique or independent third-party valuation service. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, referencing to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models.

Financial instruments, which are not actively traded in the market and those with less transparent market prices, will have less objective fair values and require broad judgment on liquidity, concentration, uncertainty in market factors and assumptions in price determination and other risks.

Diverse valuation techniques are used to determine the fair value of financial instruments, from generally accepted market valuation models to internally developed valuation models that incorporate various types of assumptions and variables.

**(ii) *Credit losses allowance***

The Group tests impairment and recognizes loss allowances on financial assets classified at amortized cost, debt instruments measured at fair value through other comprehensive income and recognizes provisions for payment guarantee, financial guarantee and unused commitments. Accuracy of allowances and provisions for credit losses is dependent upon estimation of expected cash flows of the borrower for individually assessed allowances of loans, and upon assumptions and methodology used for collectively assessed allowances for groups of loans, guarantees and unused loan commitments.

The pandemic of COVID-19 has a negative impact on the global economy despite of the Korean government's financial and economic stabilization packages. It may have a negative impact on the financial position and financial performance of the Group due to the increase of the expected credit losses on specific portfolios and the potential losses on financial assets. The detail of credit risk exposures by industry affected by the pandemic of COVID-19 as of December 31, 2022 is disclosed in Note 53. (2) and the exposures by industries could be changed according to economic fluctuations.

Taking these circumstances into account comprehensively, the Group recalculated the forward-looking information used to estimate the expected credit loss in accordance with K-IFRS 1109 'Financial Instruments' as at December 31, 2022. During the 12-month period since the previous year ended, there have been changes in forward-looking information that affect expected credit losses. It is predicted that major economic factors, such as the unemployment rate and economic growth rate, will deteriorate due to the impact of COVID-19. To reflect these changes, the Group recalculated the forward-looking information by means of increasing the probability of recession used in generating future economic scenarios and will continue to monitor the forward-looking information on a quarterly basis.

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2. **Basis of Preparation, Continued**

***(iii) Deferred taxes***

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date. Deferred income tax assets are recognized to the extent that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Actual income taxes in the future may not be identical to the recognized deferred tax assets and liabilities.

***(iv) Defined benefit liabilities***

The Group operates a defined benefit plan. Defined benefit liability is calculated by annual actuarial valuations as of the reporting date. In order to perform the actuarial valuations, assumptions for discount rates, future salary increases and others are required to be estimated. Defined benefit plans contain significant uncertainties in estimations due to its long-term nature.

**(6) Approval date for the consolidated financial statements**

The consolidated financial statements were authorized for issue by the Board of Directors on March 28, 2023, which will be submitted for approval to the shareholders' meeting to be held on March 29, 2023.

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**3. Significant Accounting Policies**

The significant accounting policies applied by the Group in preparation of its consolidated financial statements are included below. The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

**(1) Basis of consolidation**

***(i) Subsidiaries and business combinations***

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has right to, variable returns from its involvement with the entity and has the ability to affect those returns through its power of the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which controls ceases.

If a subsidiary of the Group uses accounting policies other than those adopted in the consolidated financial statements for like transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in preparing the consolidated financial statements.

For acquisitions meeting the definition of a business combination, the acquisition method of accounting is used. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. Any goodwill arising from initial consolidation is tested for impairment at least once a year and whenever events or changes in circumstances indicate the need for impairment. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date in fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed and the amount of any non-controlling interests in the acquire. Costs related to acquisition are recognized as expenses when occurred.

The excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of the Group's share of the net assets acquired, the difference is recognized directly in the consolidated statement of comprehensive income.

Intra-group balances, income and expenses, unrealized gain and loss and dividends resulting from intra-group transactions are fully eliminated

A change in the ownership interest of a subsidiary, without a change of control, is accounted for as an equity transaction. If the Group loses control over a subsidiary, it recognizes any investment retained at fair value and any surplus or deficit in profit or loss.

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**3. Significant Accounting Policies, Continued**

***(ii) Investments in associates***

Associates are all entities over which the Group has significant influence but not control. Significant influence is presumed to exist when the Group holds between 20% and 50% of the voting power. Investments in associates are accounted for by the equity method of accounting and are initially recognized at cost. The Group's investment in associates includes goodwill (net of any accumulated impairment loss) identified on acquisition. When the investors' share on the fair value of the associates' identifiable assets and liabilities exceeds acquisition cost of the associates' interest, the excess portion is recognized as the current profit for the year of acquisition.

The Group's share of its associates' post-acquisition profits or loss is recognized in the statement of comprehensive income, and its share of post-acquisition movements in reserves is recognized in reserves. When the Group's share of loss in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognize further loss, unless it has incurred obligations or made payments on behalf of the associates. The carrying amount of equity method investments and the long-term interest that partially consists of investors' net investment are included in interest in the associate.

Unrealized gain and loss on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associate. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

***(iii) Acquisitions from entities under common control***

The assets and liabilities acquired are recognized at the carrying amounts recognized previously in the Group controlling shareholder's consolidated financial statements. The difference between cash paid and acquired net assets are recorded in equity.

***(iv) Non-controlling interests***

Non-controlling interests in a subsidiary are accounted for separately from the parent's ownership interests in a subsidiary. Each component of net profit or loss and other comprehensive income is attributed to the owners of the parent and non-controlling interest holders, even when the allocation reduces the non-controlling interests balance below zero.

***(v) Changes in the parent company's ownership interest***

Changes in the parent company's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions with owners in their capacity as owners. Adjustments to non-controlling interests are based on a proportionate amount of the net assets of the subsidiary. The difference between the consideration and the adjustments made to non-controlling interests is recognized directly in equity attributable to the owners of the parent company.

**(2) Operating segments**

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components. Segment results that are reported to the chief operating decision maker include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items mainly comprise corporate assets (primarily the Group's headquarters), head office expenses, and income tax assets and liabilities. The Group recognizes the CEO as the chief operating decision maker.

**3. Significant Accounting Policies, Continued**

**(3) Foreign exchange**

***(i) Foreign currency transactions***

Transactions in foreign currencies are translated to the functional currency of company entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to the functional currency at the exchange rate at that date. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

Foreign currency differences arising on translation are recognized in profit or loss, except for differences arising on the translation of available for sale equity instruments, a financial liability designated as a hedge of the net investment in a foreign operation, or in a qualifying cash flow hedge, which are recognized in other comprehensive income. Exchange rate effect of the gain (or loss) from non-monetary item is categorized according to whether the gain (or loss) is recognized as other comprehensive income or as profit or loss.

***(ii) Foreign operations***

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

Unless the functional currency of foreign operations is in a state of hyperinflation, assets and liabilities of foreign operations are translated at the closing exchange rate at the end of the reporting period. Revenues and expenses on the statement of comprehensive income are translated at the exchange rates of the date of transaction. Foreign currency differences that arise from translation are recognized as other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation, and any adjustments in fair value to the carrying amounts of assets and liabilities due to such acquisition, are treated as assets and liabilities of the foreign operation. Therefore, such are expressed in the functional currency of the foreign operations and, alongside other assets and liabilities of the foreign operation, translated at the closing exchange rate.

In the case of the disposal of a foreign operation, cumulative amounts of exchange difference regarding the foreign operation, recognized separately from other comprehensive income, are re-categorized from assets to profit or loss as of the moment the disposal profit or loss is recognized.

***(iii) Foreign exchange of net investment in foreign operations***

Monetary items receivable from or payable to a foreign operation, with none or little possibility of being settled in the foreseeable future, are considered a part of the net investment in the foreign operation. Therefore, the exchange difference is recognized as comprehensive income or loss in the consolidated financial statement, and re-categorized to profit or loss as of the disposal of the related net investment.

**3. Significant Accounting Policies, Continued**

**(4) Recognition and measurement of financial instruments**

***(i) Initial recognition***

The Group recognizes a financial asset or a financial liability in its consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument. A regular way purchase or sale of financial assets is recognized and derecognized using trade date accounting.

The Group classifies financial assets as financial assets at fair value through profit or loss, financial assets at fair value through other comprehensive income, or financial assets at amortized cost on the basis of the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. The Group classifies financial liabilities as financial liabilities at fair value through profit or loss, or financial liabilities at amortized cost.

At initial recognition, a financial asset or financial liability is measured at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

***(ii) Subsequent measurement***

After initial recognition, financial instruments are measured at amortized cost or fair value based on classification at initial recognition.

*Amortized cost*

The amortized cost is the amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.

*Fair value*

Fair values, which the Group primarily uses for the measurement of financial instruments, are the published price quotations based on market prices or dealer price quotations of financial instruments traded in an active market where available. These are the best evidence of fair value. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, an entity in the same industry, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

If the market for a financial instrument is not active, fair value is determined either by using a valuation technique or independent third-party valuation service. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, referencing to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models.

**3. Significant Accounting Policies, Continued**

The Group uses valuation models that are commonly used by market participants and customized for the Group to determine fair values of common over-the-counter (“OTC”) derivatives such as options, interest rate swaps and currency swaps which are based on the inputs observable in markets. For more complex instruments, the Group uses internally developed models, which are usually based on valuation methods and techniques generally used within the industry, or a value measured by an independent external valuation institution as the fair values if all or some of the inputs to the valuation models are not market observable and therefore it is necessary to estimate fair value based on certain assumptions.

If the valuation technique does not reflect all factors which market participants would consider in setting a price, the fair value is adjusted to reflect those factors. Those factors include counterparty credit risk, bid-ask spread, liquidity risk and others.

The chosen valuation technique makes maximum use of market inputs and relies as little as possible on entity-specific inputs. It incorporates all factors that market participants would consider in setting a price and is consistent with economic methodologies applied for pricing financial instruments. Periodically, the Group calibrates the valuation technique and tests its validity using prices of observable current market transactions of the same instrument or based on other relevant observable market data.

***(iii) Derecognition***

Derecognition is the removal of a previously recognized financial asset or financial liability from the statement of financial position. The Group derecognizes a financial asset or a financial liability when, and only when:

***Derecognition of financial assets***

Financial assets are derecognized when the contractual rights to the cash flows from the financial assets expire or the financial assets have been transferred and substantially all the risks and rewards of ownership of the financial assets are also transferred, or all the risks and rewards of ownership of the financial assets are neither substantially transferred nor retained and the Group has not retained control. If the Group neither transfers nor disposes of substantially all the risks and rewards of ownership of the financial assets, the Group continues to recognize the financial asset to the extent of its continuing involvement in the financial asset.

If the Group transfers the contractual rights to receive the cash flows of the financial asset, but retains substantially all the risks and rewards of ownership of the financial asset, the Group continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

***Derecognition of financial liabilities***

Financial liabilities are derecognized from the statement of financial position when the obligation specified in the contract is discharged, cancelled or expires.

***(iv) Offsetting***

Financial assets and liabilities are offset and the net amount reported in the consolidated statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously.

**(5) Cash and cash equivalents**

Cash and cash equivalents comprise balances with original maturities of three months or less than three months' maturity from the date of acquisition that are subject to an insignificant risk of changes in their fair value, including cash on hand, deposits held at call with banks and other highly liquid short-term investments with original maturities of three months or less.

3. **Significant Accounting Policies, Continued**

**(6) Non-derivative financial assets**

***(i) Financial assets at fair value through profit or loss***

Any non-derivative financial asset classified as held for trading or not classified as financial assets at fair value through other comprehensive income or financial assets measured at amortized cost is categorized under financial assets at fair value through profit or loss.

The Group may designate certain financial assets upon initial recognition as at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'an accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

After initial recognition, a financial asset at fair value through profit or loss is measured at fair value and gains or losses arising from a change in the fair value are recognized in profit or loss. Interest income and dividend income from financial assets at fair value through profit or loss are also recognized in profit or loss.

***(ii) Financial assets at fair value through other comprehensive income***

The Group classifies financial assets as financial assets at fair value through other comprehensive income if they meet the following conditions: 1) debt instruments that are a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, and consistent with representing solely payments of principal and interest on the principal amount outstanding or 2) equity instruments, not held for trading with the objective of generating a profit from short-term fluctuations in price or dealer's margin, designated as financial assets at fair value through other comprehensive income.

After initial recognition, a financial asset at fair value through other comprehensive income is measured at fair value. Gain and loss from changes in fair value, other than dividend income and interest income amortized using effective interest method and exchange differences arising on monetary items which are recognized directly in income as interest income or expense, are recognized as other comprehensive income in equity.

At disposal of financial assets at fair value through other comprehensive income, cumulative gain or loss is recognized as profit or loss for the reporting period. However, cumulative gain or loss of equity instrument designated as fair value through other comprehensive income are not recycled to profit or loss at disposal.

Financial assets at fair value through other comprehensive income denominated in foreign currencies are translated at the closing rate. Exchange differences resulting from changes in amortized cost are recognized in profit or loss, and other changes are recognized as equity.

***(iii) Financial assets measured at amortized cost***

A financial asset, which are held within the business model whose objective is to hold assets in order to collect contractual cash flows and consistent with representing solely payments of principal and interest on the principal amount outstanding, are classified as a financial asset at amortized cost. Financial assets at amortized cost are subsequently measured at amortized cost using the effective interest method after initial recognition and interest income is recognized using the effective interest method.

**3. Significant Accounting Policies, Continued**

**(7) Expected Credit Loss of Financial Assets**

The Group measures expected credit loss and recognizes loss allowance at the end of the reporting period for financial assets measured at amortized cost and fair value through other comprehensive income with the exception of financial asset measured at fair value through profit or loss.

The expected credit loss (“ECL”) is the weighted average amount of possible outcomes within a certain range, reflecting the time value of money, estimates on the past, current and future situations, and information accessible without excessive cost of effort.

The Group uses the following three measurement techniques in accordance with K-IFRS:

- General approach: for financial assets and off-balance-sheet unused credit line that are not applied below two approaches
- Simplified approach: for receivables, contract assets and lease receivables
- Credit-impaired approach: for purchased or originated credit-impaired financial assets

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses at each reporting date.

The Group applies the simplified approach to 1) trade receivables and contract assets that do not have a significant financing component or 2) trade receivables, contract assets and lease receivables upon determining the Group’s accounting policies as the application of the simplified approach. The approach requires expected lifetime losses to be recognized from initial recognition of the financial assets. Under credit-impaired approach, the Group shall only recognize the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception
- Other changes in the rates or terms of an existing financial instrument that would be significantly different if the instrument was newly originated or issued at the reporting date
- An actual or expected significant change in the financial instrument’s external credit rating.
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioural scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past due information

**(i) *Forward-looking information***

The Group uses forward-looking information, when it determines whether the credit risk has increased significantly since initial recognition and measures expected credit losses.

The Group assumes the risk component has a certain correlation with the business cycle, and calculates the expected credit loss by reflecting the forward-looking information with macroeconomic variables on the measurement inputs.

Forward looking information used in calculation of expected credit loss is derived after comprehensive consideration of a variety of factors including scenario in management planning, worst-case scenario used for stress testing, third party forecast, and others.

3. **Significant Accounting Policies, Continued**

***(ii) Measuring expected credit losses on financial assets at amortized cost***

The amount of the loss on financial assets at amortized cost is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. The Group estimates expected future cash flows for financial assets that are individually significant (individual assessment of impairment).

For financial assets that are not individually significant, the Group collectively estimates expected credit loss by grouping loans with homogeneous credit risk profile (collective assessment of impairment).

***Individual assessment of impairment***

Individual assessment of impairment losses is calculated using management's best estimate on present value of expected future cashflows. The Group uses all the available information including operating cash flow of the borrower and net realizable value of any collateral held.

***Collective assessment of impairment***

Collective assessment of loss allowance involves historical loss experience along with incorporation of forward-looking information. Such process incorporates factors such as type of collateral, product and borrowers, credit rating, size of portfolio and recovery period and applies probability of default on a group of assets and loss given default by type of recovery method. Also, the expected credit loss model involves certain assumption to determine input based on loss experience and forward-looking information. These models and assumptions are periodically reviewed to reduce gap between loss estimate and actual loss experience.

The expected credit loss for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

***(iii) Measuring expected credit losses on financial assets at fair value through other comprehensive income***

Measuring method of expected credit losses on financial assets at fair value through other comprehensive income is equal to the method of financial assets at amortized cost, except for changes in loss allowances that are recognized as other comprehensive income. Amounts recognized in other comprehensive income for sale or repayment of financial assets at fair value through other comprehensive income are reclassified to profit or loss.

**3. Significant Accounting Policies, Continued**

**(8) Derivative financial instruments including hedge accounting**

Derivative financial instruments are initially recognised at fair value upon agreement of the contract and re-estimated at fair value subsequently. The recognition of profit or loss due to changes in fair value of derivative instruments is as stated below:

***(i) Hedge accounting***

Derivative financial instruments are accounted differently depending on whether hedge accounting is applied, and therefore, are classified into trading purpose derivatives and hedging purpose derivatives.

Upon the transaction of hedging purpose derivatives, two different types of hedge accounting are applied; a fair value hedge, and a cash flow hedge. A fair value hedge is a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss. A cash flow hedge is a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and (ii) could affect profit or loss.

At inception of the hedge relationship, the Group formally documents the relationship between the hedged item and the hedging instrument, including the nature of the risk, the objective and strategy for undertaking the hedge, and the method that will be used to assess the effectiveness of the hedging relationship.

***Fair value hedge***

For designated and qualifying fair value hedges, the change in the fair value of a hedging derivative is recognised in profit or loss in the statement of comprehensive income. Meanwhile, the change in the fair value of the hedged item, attributable to the risk hedged, is recorded as part of the carrying value of the hedged item and is also recognised in profit or loss in the statement of comprehensive income. When the hedge no longer meets the criteria for hedge accounting, the hedge relationship is terminated. For hedged item recorded at amortized cost, the difference between the carrying value of the hedged item on termination and the face value is amortized over the remaining term of the original hedge using the EIR.

***Cash flow hedge***

For designated and qualifying cash flow hedges, the effective portion of gain or loss on the hedging instruments is initially recognised directly in equity. The ineffective portion of the gain or loss on the hedging instrument is recognised immediately in the statement of comprehensive income. When the hedged cash flow affects the profit or loss in statement of comprehensive income, the gain or loss on the hedging instrument is recorded in the corresponding income or expense line in profit or loss in the statement of comprehensive income. When a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the hedged forecasted transaction is ultimately recognised in the statement of comprehensive income. When a forecasted transaction is no longer expected to occur, the cumulative gain and loss that was reported in equity is immediately transferred to profit or loss in the statement of comprehensive income.

***Hedges of net investments in foreign operations***

The Group designates non-derivative financial instruments as hedging instruments for foreign currency risk arising from net investments in foreign operations and recognises the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge in other comprehensive income. The cumulative amounts recognised in other comprehensive income relating to both the foreign exchange differences arising on translation of the results and financial position of the foreign operation and the gain or loss on the hedging instrument that is determined to be an effective hedge of the net investment are reclassified from equity to profit or loss as a reclassification adjustment when the Group disposes of the foreign operation.

***(ii) Trading purpose derivatives***

For trading purpose derivatives transaction, changes in the fair value of derivatives are recognised in net income.

**(9) Day one profit or loss recognition**

For financial instruments classified as level 3 on the fair value level hierarchy measured using assess variables not observable in the market, the difference between the fair value at initial recognition and the transaction price, which is equivalent to Day one profit or loss, is amortized by using the straight-line method over time.

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3. **Significant Accounting Policies, Continued**

**(10) Property and equipment**

The Group's property and equipment is recognized at the carrying amount as historical costs less accumulated depreciation and accumulated impairment in value. Historical costs include the expenditures directly related to the acquisition of assets.

Subsequent costs are recognized in the carrying amount of assets or, if appropriate, as separate assets if the probabilities future economic benefits associated with the assets will flow into the Group and the costs can be measured reliably; the carrying amount of the replaced part is derecognized. Furthermore, any other repairs or maintenances are charged to profit or loss as incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight line method to the amount of residual value less acquisition cost over the following estimated useful lives:

Type	Useful lives (years)
Buildings	12 ~ 60
Structure	10 ~ 51
Leasehold improvements	4
Vehicles	4
Equipment	4 ~ 8
Other properties	2 ~ 40

Property and equipment are impaired when its carrying amount exceeds the recoverable amount. The Group assesses residual value and economic life of its assets at each reporting date and adjusts its useful life when necessary. Any gain or loss arising from the disposal of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in non-operating income (expense) in the consolidated statement of comprehensive income.

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3. **Significant Accounting Policies, Continued**

**(11) Investment property**

The Group classifies property held for the purpose of rental income or benefits from capital appreciation as investment property. Investment property is measured initially at cost, including transaction costs. Subsequent to initial recognition, the cost model is applied. Subsequent to initial recognition, an item of investment property is carried at its cost less any accumulated depreciation and any accumulated impairment loss.

Investment properties are derecognized either when they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of de-recognition. Reclassification to or from other account is made if there is a change in use of corresponding investment property.

Depreciation of investment property is calculated using the straight line method over their estimated useful lives as follows:

Type	Useful lives (years)
Buildings	20 ~ 50
Structure	10 ~ 40

**(12) Intangible assets**

An intangible asset is recognized only when its cost can be measured reliably, and the probabilities future economic benefits from the asset will flow into the Group are high. Separately acquired intangible assets are recognized at the acquisition cost, and subsequently, the cost less accumulated depreciation and accumulated impairment is recognized as the carrying amount.

Intangible assets with finite lives are amortized over the 4-year to 30-year period of useful economic lives using the straight line method. At the end of each reporting period, the Group reviews intangible assets for any evidence that indicate impairment, and upon the presence of such evidence, the Group estimates the amount recoverable and recognizes the loss accordingly. Intangible assets are derecognized either when they have been disposed of or when the intangible assets are permanently withdrawn from use and no future economic benefit is expected from its disposal.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually. Furthermore, the Group reviews such intangible assets to determine whether it is appropriate to consider these assets to have indefinite useful lives. If in the case the Group concludes an asset is not qualified to be classified as non-finite, prospective measures are taken to consider such an asset as finite.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

**3. Significant Accounting Policies, Continued**

**(13) Leases**

**(i) *Lessee accounting***

The Group recognizes a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments at the commencement date of the lease. The Group elected not to apply the requirements to the short-term leases and low value assets.

*Right-of-use asset*

The right-of-use asset is measured at its cost less subsequent accumulated depreciation and accumulated impairment loss with adjustments reflected arising from remeasurements of the lease liability. The cost of the right-of-use asset comprise the amount of the initial measurement of the lease liability, any initial direct costs incurred by the lessee and any lease payments made at or before the commencement date, less any lease incentive received. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis from the commencement date of the lease.

*Lease liabilities*

At the commencement date, the lease liability is measured at present value of the lease payments that are not paid at that date. Lease payments include fixed payments (including in-substance fixed payments), less any lease incentives receivable, variable lease payments that depend on an index or a rate, amounts expected to be payable by the lessee under residual value guarantees, the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease. The variable lease payments that do not depend on an index or a rate are recognized as an expense in the period in which the event or condition that triggers those payments occurs.

When measuring the present value, the lease payments are discounted using the interest rate implicit in the lease. If such implicit rate cannot be readily determined, the Group uses the Group's incremental borrowing rate. The lease liability is subsequently increased by the amount of interest expenses recognized on the lease liability and reduced by the lease payments made.

Lease liabilities are remeasured when the future lease payments are changed due to the following:

- Changes in an index or a rate;
- Changes in amounts expected to be payable by the lessee under residual value guarantees;
- Changes in the assessment of whether a purchase option or an option to renew is reasonably certain to be exercised; or
- Changes in the assessment of whether it is reasonably certain that an option to terminate the lease will not be exercised.

*Leases of low-value assets and short-term leases*

The Group applies the recognition exemption for leases of low-value assets (e.g., office supplies and IT equipment) and short-term leases (i.e., leases with a lease term of 12 months or less). In these cases, lease payments are charged to profit or loss on a straight-line basis over the period of lease.

**3. Significant Accounting Policies, Continued**

***(ii) Lessor accounting***

The classification of leases is based on the extent to which risks and rewards incidental to ownership of a leased asset lie with the lessor.

*Finance lease*

Leases of assets where the Group has substantially all the risks and rewards of ownership are classified as finance leases, and the Group presents them as a receivable at an amount equal to the net investment in the lease. Also, initial direct cost that includes directly and additionally incurred commission fee, legal expenses, and internal accrued costs are included in finance lease receivables. The Group accounts for lease payment by apportioning into finance lease receivables and interest revenue, and interest revenue is recognized using the EIR method on uncollected finance lease net investment.

*Operating lease*

A lease is classified as operating lease if it does not transfer substantially all the risks and rewards incidental to ownership, and the related asset is presented as acquisition cost less accumulated depreciation. Moreover, the minimum lease payment excluding guaranteed residual value is recognized as revenue on a straight line basis over the lease term. Initial direct costs incurred by lessors in negotiating and arranging an operating lease shall be added to the carrying amount of the leased asset and recognized as an expense over the lease term, and the depreciation policy for depreciable leased assets shall be consistent with the lessors' normal depreciation policy for similar assets.

**(14) Impairment of non-financial assets**

The Group tests for any evidence of impairment in assets and reviews whether the impairment has taken place by estimating the recoverable amount, at the end of each reporting period. The Group estimates the recoverable amount of each asset or a whole cash-generating unit unless it is possible to estimate the amount of the asset in that unit. The recoverable amount is the higher of the fair value less cost and value in use, of an asset. The Group recognizes the difference between the carrying amount and the recoverable amount of the asset as an impairment loss if the carrying amount exceeds the recoverable amount.

Any goodwill arising on the acquisition of a business is allocated to each cash-generating unit that is expected to gain the benefits of the synergy effect. Impairment on cash-generating unit deducts other assets in proportion to their carrying amounts after deducting the carrying amount of goodwill allocated in that unit. Impairment loss on goodwill cannot be reversed once it is recognized.

Except for impairment losses in respect of goodwill that are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceeds the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years.

**3. Significant Accounting Policies, Continued**

**(15) Assets held for sale**

Non-current assets (or disposal groups) that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal groups) must be available for immediate sale in its present condition and its sale must be highly probable. The assets (or disposal groups) that are classified as assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

The Group recognizes an impairment loss for any initial or subsequent write-down of an asset (or disposal groups) to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized.

Non-current assets that are classified as held for sale or part of a disposal group classified as held for sale are not depreciated (or amortized).

**(16) Non-derivative financial liabilities**

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liability. The Group recognizes these financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

***(i) Financial liabilities at fair value through profit or loss***

Financial liabilities at fair value through profit or loss in the current year include financial liabilities held for trading and financial liabilities designated at FVTPL upon initial recognition. Financial liabilities and derivatives are classified as financial instruments held for trading if they are acquired for the purpose of repurchasing in the near future. Financial liabilities are classified as financial liabilities at FVTPL upon initial recognition, if the profit or loss from the liabilities indicates to be more purpose-appropriate to be recognized as profit or loss. Financial liabilities at FVTPL are designated at fair value in subsequent measurements, and any related un-realized profit or loss is recognized as profit or loss.

**3. Significant Accounting Policies, Continued**

***(ii) Financial liabilities measured at amortized cost***

Financial liabilities measured at amortized cost are recognized at fair value less cost less transaction cost upon initial recognition, and subsequently at amortized costs. The difference between the proceeds (net of transaction cost) and the redemption value is recognized in the statement of comprehensive income over the periods of the liabilities using the EIR.

Fees paid on the establishment of a loan facility are recognized as transaction costs of the loan, if the probability that some or all of the facility will be drawn down is high. The amount is deferred until the financial liability would be withdrawn. If, however, there is not enough evidence to conclude a draw-down of some or all of the facility will occur, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facility to which it relates.

***(iii) De-recognition of financial liabilities***

A financial liability is de-recognized when the obligation under the liability is discharged, cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a de-recognition of the original liability and the recognition of a new liability. The difference between the carrying value of the original financial liability and the consideration paid is recognized in profit or loss.

**(17) Employee benefits**

***(i) Short-term employee benefits***

Short-term employee benefits are employee benefits that are due to be settled wholly before 12 months after the end of the reporting period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

***(ii) Retirement benefits: defined contribution plans***

A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate fund. The Group is no longer responsible for any foreseeable future liability after a certain amount or percentage of money is set aside for defined contribution plans. If the pension plan allows for early retirement, payments are recognized as employee benefits. If the contribution already paid exceeds the contribution due for service before the end of the reporting period, the Group recognizes that excess as an asset to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

***(iii) Retirement benefits: defined benefit plans***

The Group classifies all the pensions as defined benefit plans except defined contribution plans. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets. The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and have terms to maturity similar to the terms of the related pension liability.

Remeasurements of the net defined benefit liabilities (assets), which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income.

**3. Significant Accounting Policies, Continued**

**(18) Provisions**

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

**(19) Financial guarantees**

Financial guarantee contracts are contracts that require the issuer (the Group) to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due, in accordance with the original or changed terms of a debt instrument. Financial guarantees are initially recognized in the financial statements at fair value on the date the guarantee was given.

Subsequent to initial recognition, the Group's liabilities under such guarantees are measured at the higher of:

- The amount determined in accordance with K-IFRS 1109 '*Financial Instruments*' and
- The initial amount recognized, less, when appropriate, cumulative amortization recognized in accordance with K-IFRS 1115 '*Revenue from Contracts with Customers*'.

**(20) Securities under resale or repurchase agreements**

Securities purchased under agreements to resell are recorded as other loans and receivables and the related interest from these securities is recorded as interest income; Securities sold under agreements to repurchase are recorded as borrowings, and the related interest from these securities is recorded as interest expense.

**(21) Policy reserves for insurance contracts**

In accordance with the *Insurance Business Act* and related insurance standards, the Group is required to maintain policy reserves, which consist of premium reserve, unearned premium reserve, reserve for outstanding claims, reserve for participating policyholders' dividends, excess participating policyholders' dividend reserve and reserve for loss on participating insurance policies, as a liability which is measured in accordance with the *Manual for Calculation of Premium and Policy Reserves* as approved by the Financial Supervisory Commission. Details are as follows:

**(i) Premium reserve**

Premium reserve represents an amount calculated based on a net premium valuation, which is the greater of an amount calculated by using the standard interest rate and standard risk rate issued by the Financial Supervisory Service (FSS), and an amount calculated using an internally generated rate derived by the Group. If the reserve is at zero or less, the amount is to be recorded at nil.

**(ii) Unearned premium reserve**

Unearned premium reserve represents an amount allocated for certain premiums whose initial payment date falls within the current reporting period and future payments, if any, fall subsequent to the end of the reporting period.

**(iii) Guaranteed benefit reserve**

Guaranteed benefit reserve guarantees a certain level of the insurance claims considering expected loss in the future. The Group's guaranteed benefit reserve consists of the following:

- Guaranteed minimum accumulation benefit: reserves that guarantee financial resources for the pension benefit amount that equals to the predetermined value in the contract.
- Guaranteed minimum death benefit: reserves that guarantee death benefit amount that equals to the predetermined value in the contract.
- Guaranteed minimum withdrawal benefit: reserves that guarantee the interim withdrawals amount that equals to the predetermined value in the contract during the period for interim withdrawals.
- Guaranteed lifetime withdrawal benefit: reserves that guarantee the interim withdrawals amount that equals to the predetermined value in the contract during lifetime.
- Other guaranteed benefits: guaranteed benefit reserves other than those listed above for a guarantee of insurance proceeds in excess of a certain level.

**3. Significant Accounting Policies, Continued**

***(iv) Reserve for outstanding claims***

Reserve for outstanding claims represents a reserve based on estimate of loss for insured events that have occurred prior to the reporting date but have not yet been settled or determined, including:

- Outstanding losses: losses that have been reported to the insurer but are still in the process of settlement (in cases where a claim is partially paid, the remnant is reported).
- Incurred but not reported (IBNR): an estimate of the amount based on historical information of an insurer's liability for claim-generating events that have taken place but have not yet been reported to the insurer.
- Reserve for lapsed insurance contracts: reserve for insurance cancellation refund for lapsed insurance contracts due to non-payment of insurance premium that still can be revived or deferred within a certain period.
- Outstanding claims: legitimate claims, such as compensation, refund, dividend that an insurer has not yet paid to policy holder.

***(v) Reserve for participating policyholders' dividends***

The reserve for participating policyholders' dividends is classified into interest dividend reserve, mortality dividend reserve, interest rate difference guarantee reserve and long-term duration dividend reserve.

***(vi) Excess participating policyholders' dividend reserve***

Pursuant to relevant laws and contracts, the Group may provide an excess participating policyholder dividend reserve based on the operating results of related insurance products. The reserve may be used to pay participating policyholder dividends or additional dividends.

**(22) Equity**

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares and share options are recognized as a deduction from equity, net of any tax effects.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or loss from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

Non-controlling interests refer to equity in a subsidiary not attributable, directly or indirectly, to a parent. Non-controlling interests consist of the minority interest net income calculated under K-IFRS 1103 'Business Combinations' at the date of the initial combination, and minority interest of changes in equity after the business combination.

**(23) Government subsidy**

Government subsidy without repayment obligation, which is used for the acquisition of certain assets, is accounted for as a deduction from the acquisition cost of the acquired assets. Such subsidy amount is offset against the depreciation or amortization of the acquired assets during such assets' useful life.

**(24) Interest income and expense**

Interest income and expense are recognized in profit or loss using the effective interest method. The effective interest method measures the amortized costs of financial instruments and allocates the interest income or expense during the related period.

Upon the calculation of the effective interest rate, the Group estimates future cash flows by taking into consideration all contractual terms of the financial instrument, but not future credit loss. The calculation also reflects any fees or points paid or received, transaction costs and any related premiums or discounts. In the case that the cash flow and expected duration of a financial instrument cannot be estimated reliably, the effective interest rate is calculated by the contractual cash flow during the contract period.

Once an impairment loss has been recognized on a financial asset or a group of similar assets, subsequent interest income is recognized on the interest rate that was used to discount future cash flow for measuring the impairment loss.

**3. Significant Accounting Policies, Continued**

**(25) Fees and commission income**

Fees and commission income and expense are classified as follows according to related regulations:

***(i) Fees and commission from financial instruments***

Fees and commission income and expense that are integral to the effective interest rate on a financial asset or liability are included in the measurement of the effective interest rate. It includes those related to evaluation of the borrowers' financial status, guarantee, collateral, other agreements and related evaluation as well as business transaction, rewards for activities, such as document preparation and recording and setup fees incurred during issuance of financial liabilities. However, when financial instruments are classified as financial instruments at fair value through profit or loss, fees and commission are recognized as revenue upon initial recognition.

***(ii) Fees and commission from services***

Fees and commission income charged in exchange for services to be performed during a certain period of time such as asset management fees, consignment fees and assurance service fees are recognized as the related services are performed. When a loan commitment is not expected to result in the draw-down of a loan and K-IFRS 1109 'Financial Instrument' is not applied for the commitment, the related loan commitment fees are recognized as revenue proportionally to time over the commitment period.

***(iii) Fees and commission from significant transaction***

Fees and commission from significant transactions, such as trading stocks and other securities, negotiation and mediation activities for third parties, for instance business transfer and takeover, are recognized when transactions are completed.

**(26) Dividend income**

Dividend income is recognized upon the establishment of the Group's right to receive the payment.

**(27) Income tax expense**

Income tax expense comprises current and deferred income tax. Current income tax and deferred income tax are recognized in profit or loss except to the extent that the tax arises from a transaction or event, which is recognized in other comprehensive income or directly in equity, or a business combination.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the reporting period when the assets are realized or the liabilities settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred income tax assets and liabilities reflects the income tax effects that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Subsidiaries calculate income tax based on their tax laws and report the amount as current income tax liability.

The Group recognizes deferred income tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred income tax assets for all deductible temporary differences arising from investments in associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred income tax asset is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred income tax asset to be utilized.

Deferred income tax assets and liabilities are offset only if the Group has a legally enforceable right to offset the related current income tax assets and liabilities, and the assets and liabilities relate to income tax levied by the same tax authority and are intended to be settled on a net basis.

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3. **Significant Accounting Policies, Continued**

**(28) Accounting for trust accounts**

The Group, for the purpose of financial reporting, differentiates trust assets from identifiable assets according to the *Financial Investment Services and Capital Markets Act*. Furthermore, the Group receives trust fees from the application, management and disposal of trust assets, and appropriates such amounts for fees from trust accounts.

Meanwhile, in the case the fee from an unspecified principal or interests guaranteed money in trust does not meet the principal or interest amount, even after appropriating deficit with trust fees and special reserve, the Group fills in the remaining deficit in the trust account and appropriates such amounts for losses on trust accounts.

**(29) Regulatory reserve for credit losses**

When the total sum of allowance for possible credit losses under K-IFRS is lower than the amount prescribed in Article 29(1) of the *Regulations on Supervision of Banking Business*, the Group records the difference as a regulatory reserve for credit losses at the end of each reporting period.

In the case that the existing regulatory reserve for credit losses exceeds the amount needed to be set aside at the reporting date, the surplus may be reversed. Furthermore, in the case that undisposed deficit exists, a regulatory reserve for credit losses is saved from the time the undisposed deficit is disposed.

**(30) Earnings per share**

The Group represents its diluted and basic earnings per common share in the consolidated statement of comprehensive income. Basic earnings per share is calculated by dividing net profit attributable to shareholders of the Group by the weighted average number of common shares outstanding during the reporting period. Diluted earnings per share is calculated by adjusting net profit attributable to common shareholders of the Group, considering dilution effects from all potential common shares, and the weighted average number of common shares outstanding.

**(31) Correction of errors**

Prior period errors shall be corrected by retrospective restatement in the first set of financial statements authorised for issue after their discovery except to the extent that it is impracticable to determine either the period-specific effects or the cumulative effect of the error.

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**4. Cash and Due from Banks**

(1) Cash and due from banks as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Cash	₩ 730,429	618,444
Due from banks in Korean won:		
Due from Bank of Korea	3,360,908	5,673,412
Other due from banks in Korean won	1,041,299	775,177
	4,402,207	6,448,589
Due from banks in foreign currencies / off-shores	6,304,386	4,786,331
	₩ 11,437,022	11,853,364

(2) Restricted due from banks as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Reserve deposit	₩ 1,181,823	4,387,441
Deposit of monetary stabilization account	2,470,000	1,500,000
Others	444,768	565,162
	₩ 4,096,591	6,452,603

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**5. Securities Measured at FVTPL**

(1) Details of securities in financial assets at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks	₩ -	2,978,850	2,733,747
Equity investments	-	1,911,408	2,079,343
Beneficiary certificates	-	10,251,890	10,440,078
Government and public bonds	718,000	682,243	683,215
Financial bonds	712,200	707,943	688,558
Corporate bonds	816,014	813,594	773,161
Commercial papers	29,999	29,422	29,836
Others	274,784	274,784	272,324
	<u>2,550,997</u>	<u>17,650,134</u>	<u>17,700,262</u>
Securities denominated in foreign currencies/off-shores:			
Stocks	-	21,784	22,168
Equity investments	-	317,202	338,440
Beneficiary certificates	-	978,356	926,954
Debt securities	182,051	182,051	122,585
	<u>182,051</u>	<u>1,499,393</u>	<u>1,410,147</u>
₩	<u>2,733,048</u>	<u>19,149,527</u>	<u>19,110,409</u>
<b>December 31, 2021</b>			
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks	₩ -	1,804,967	1,639,347
Equity investments	-	1,392,064	1,525,636
Beneficiary certificates	-	6,612,784	5,600,696
Government and public bonds	707,000	681,019	651,062
Financial bonds	277,900	276,753	275,436
Corporate bonds	781,124	780,019	800,132
Others	409,699	348,899	319,033
	<u>2,175,723</u>	<u>11,896,505</u>	<u>10,811,342</u>
Securities denominated in foreign currencies/off-shores:			
Stocks	-	7,836	7,869
Equity investments	-	110,131	142,465
Beneficiary certificates	-	771,669	723,436
Debt securities	53,347	52,985	53,218
	<u>53,347</u>	<u>942,621</u>	<u>926,988</u>
₩	<u>2,229,070</u>	<u>12,839,126</u>	<u>11,738,330</u>

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**5. Securities Measured at FVTPL, Continued**

(2) Equity securities with disposal restrictions in financial assets at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
Company	Number of shares	Carrying amount	Restricted period
National Happiness Fund	34,066 ₩	28,873	Undecided

<b>December 31, 2021</b>			
Company	Number of shares	Carrying amount	Restricted period
National Happiness Fund	34,066 ₩	47,647	Undecided
Shinhan Metal Co., Ltd.	7,692	-	Until December 31, 2022
	<u>41,758 ₩</u>	<u>47,647</u>	

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**6. Securities Measured at FVOCI**

(1) Details of securities measured at FVOCI as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks and equity investments	₩ -	10,873,813	11,149,883
Government and public bonds	9,259,848	7,958,772	6,575,782
Financial bonds	2,600,000	2,853,251	2,824,496
Corporate bonds	9,280,879	9,299,251	8,686,231
Others	2,118,938	2,125,404	5,996,794
	23,259,665	33,110,491	35,233,186
Securities denominated in foreign currencies/off-shores:			
Stocks	-	4,336	6,025
Debt securities	10,907,828	12,726,708	11,741,471
	10,907,828	12,731,044	11,747,496
₩	34,167,493	45,841,535	46,980,682
<b>December 31, 2021</b>			
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks and equity investments	₩ -	10,204,480	10,476,340
Government and public bonds	1,160,000	1,158,713	1,157,222
Financial bonds	1,820,000	1,820,839	1,817,298
Corporate bonds	8,444,966	8,445,272	8,303,980
Others	2,137,933	2,137,928	8,399,956
	13,562,899	23,767,232	30,154,796
Securities denominated in foreign currencies/off-shores:			
Stocks	-	7,631	6,995
Debt securities	8,101,939	8,311,303	8,484,959
	8,101,939	8,318,934	8,491,954
Loaned securities	420,000	416,002	417,640
₩	22,084,838	32,502,168	39,064,390

Equity instruments that are held by acquisition due to conversion from debt instruments, investment in kind and investment in ventures and SMEs are designated as measured at FVOCI. The realized pre-tax income and loss on disposal of equity securities for the years ended December 31, 2022 and 2021 are the amount of ₩266,630 million of gain and ₩74,720 million of gain, respectively, which is directly recognized in retained earnings.

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**6. Securities Measured at FVOCI, Continued**

(2) Changes in securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 39,064,390	34,920,659
Acquisition	16,053,624	37,441,512
Disposal	(13,847,034)	(37,229,695)
Change due to amortization	35,264	(46,583)
Change in fair value	(4,536,586)	3,273,627
Reclassification (*1)	9,553,486	(15,657)
Foreign exchange differences	644,033	574,342
Others (*2)	13,505	146,185
Ending balance	₩ 46,980,682	39,064,390

(\*1) For the year ended December 31, 2022, the amount includes the reclassification from assets held for sale to securities measured at FVOCI related to KDB Life Insurance Co., Ltd.

(\*2) For the year ended December 31, 2022, others represent the increase in securities measured at FVOCI including shares of FADU Inc., TETOS Co., Ltd. and others acquired through exercise of conversion rights of the convertible bonds and shares of Boowon Industry Co., Ltd., ENTECHNOLOGIES Co., Ltd. and others acquired in accordance with the rehabilitation plan under the Debtor Rehabilitation and Bankruptcy Act. For the year ended December 31, 2021, others represent the increase in securities measured at FVOCI including shares of DAE SUN SHIPBUILDING & ENGINEERING CO., LTD., HEUNG-A SHIPPING CO., LTD. and others acquired in accordance with the workout plan decided by the Council of Financial Creditors, shares of Woongjin Energy Co., Ltd. and others acquired in accordance with the rehabilitation plan under the Debtor Rehabilitation and Bankruptcy Act. and shares of L&F CO., LTD., NKMAX Co., Ltd., KASA NETWORK PTE. LTD. and others acquired through exercise of conversion rights of the convertible bonds.

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**6. Securities Measured at FVOCI, Continued**

(3) Equity securities with disposal restrictions in securities measured at FVOCI as of December 31, 2022 and 2021 are as follows:

Company (*1)	<b>December 31, 2022</b>		
	Number of shares	Carrying amount	Restricted period
UAMCO., Ltd.	113,050 ₩	188,721	Undecided
High Gain Antenna Co., Ltd.	18,138	270	Undecided
Kumho Tire Co., Inc.	21,339,320	71,167	Until July 6, 2023 (*2)
Daehan Shipbuilding Co., Ltd.	231,459	2,871	Until August 31, 2023
	<u>21,701,967 ₩</u>	<u>263,029</u>	

(\*1) The Group sold all of its shares in HEUNG-A SHIPPING CO., LTD. and K Shipbuilding Co., Ltd. for the year ended December 31, 2022.

(\*2) From July 6, 2021, 50% of the shares may be sold every year.

Company	<b>December 31, 2021</b>		
	Number of shares	Carrying amount	Restricted period
UAMCO., Ltd.	113,050 ₩	176,628	Undecided
High Gain Antenna Co., Ltd.	18,138	273	Undecided
DNGV., Co. Ltd. (*2)	500,000	1	Undecided
HEUNG-A SHIPPING CO., LTD.	3,019,800	8,153	Until July 11, 2022
K Shipbuilding Co., Ltd.	1,115,242	1,258	Until August 3, 2022
WOOJEON CO., LTD.	591,118	1	Until November 12, 2022
Kumho Tire Co., Inc.	21,339,320	98,374	Until July 6, 2023 (*)
POSCO PLANTEC CO., LTD.	1,838,744	1,806	Until December 31, 2023 or listing date
	<u>28,535,412 ₩</u>	<u>286,494</u>	

(\*) From July 6, 2021, 50% of the shares may be sold every year.

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**6. Securities Measured at FVOCI, Continued**

(4) Changes in the loss allowance in relation to securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩ 11,455	3,269	72,624	87,348
Transfer to 12-month expected credit loss	157	(157)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired debt securities	(1,127)	1,127	-	-
Provision for loss allowance	(3,330)	532	(140)	(2,938)
Disposal	(677)	-	-	(677)
Foreign currency translation	195	(1)	355	549
Others	4,183	(2,223)	855	2,815
Ending balance	₩ 10,856	2,547	73,694	87,097

<b>2021</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩ 9,218	1,358	71,354	81,930
Transfer to 12-month expected credit loss	400	(400)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired debt securities	(1,786)	1,786	-	-
Provision for loss allowance	5,246	1,469	822	7,537
Disposal	(485)	-	-	(485)
Foreign currency translation	103	-	766	869
Others	(1,241)	(944)	(318)	(2,503)
Ending balance	₩ 11,455	3,269	72,624	87,348

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**7. Securities Measured at Amortized Cost**

(1) Securities measured at amortized cost as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
		<u>Amortized cost</u>	<u>Fair value</u>
Securities denominated in Korean won:			
Government and public bonds	₩	2,964,285	2,964,285
Financial bonds		2,961,886	2,961,788
Corporate bonds		3,296,921	3,290,517
Others		4,448	4,448
		<u>9,227,540</u>	<u>9,221,038</u>
Securities denominated in foreign currencies:			
Corporate bonds		991,810	779,605
		<u>10,219,350</u>	<u>10,000,643</u>
Less:			
Loss allowance		(7,092)	
	₩	<u>10,212,258</u>	
		<b>December 31, 2021</b>	
		<u>Amortized cost</u>	<u>Fair value</u>
Securities denominated in Korean won:			
Government and public bonds	₩	1,437,496	1,437,496
Financial bonds		1,088,249	1,088,203
Corporate bonds		3,616,291	3,607,456
		<u>6,142,036</u>	<u>6,133,155</u>
Securities denominated in foreign currencies:			
Corporate bonds		71,057	70,703
		<u>6,213,093</u>	<u>6,203,858</u>
Less:			
Loss allowance		(9,235)	
	₩	<u>6,203,858</u>	

(2) Changes in securities measured at amortized cost for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Beginning balance	₩	6,203,858	2,120,469
Acquisition		4,933,576	4,794,058
Redemption		(1,933,533)	(700,000)
Change due to amortization		13,109	(6,118)
Impairment loss		2,524	(4,788)
Foreign exchange differences		54,014	237
Reclassification, etc. (*)		938,710	-
Ending balance	₩	<u>10,212,258</u>	<u>6,203,858</u>

(\*) For the year ended December 31, 2022, the amount includes the reclassification from assets held for sale to securities measured at FVOCI related to KDB Life Insurance Co., Ltd.

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**8. Loans Measured at FVTPL**

(1) Loans measured at FVTPL as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
		<u>Amortized cost</u>	<u>Fair value (Carrying amounts)</u>
Loans in Korean won:			
Privately placed corporate bonds	₩	459,931	542,619
		<b>December 31, 2021</b>	
		<u>Amortized cost</u>	<u>Fair value (Carrying amounts)</u>
Loans in Korean won:			
Privately placed corporate bonds	₩	471,645	644,412

(2) Gains (losses) related to loans measured at FVTPL for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Transaction gains (losses) on loans measured at FVTPL			
Transaction gains	₩	8,100	1,860,411
Transaction losses		<u>(8,709)</u>	<u>(9,692)</u>
		(609)	1,850,719
Valuation gains (losses) on loans measured at FVTPL			
Valuation gains		9,364	83,772
Valuation losses		<u>(88,248)</u>	<u>(4,349)</u>
		<u>(78,884)</u>	<u>79,423</u>
	₩	<u>(79,493)</u>	<u>1,930,142</u>

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**9. Loans Measured at Amortized Cost**

(1) Loans measured at amortized cost and allowance for loan losses as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
		<u>Amortized cost</u>	<u>Fair value</u>
Loans in Korean won:			
Loans for working capital	₩	71,204,285	69,583,844
Loans for facility development		65,218,913	63,233,829
Loans for households		1,403,975	1,390,978
Inter-bank loans		3,043,216	2,752,261
		<u>140,870,389</u>	<u>136,960,912</u>
Loans in foreign currencies:			
Loans		30,274,562	29,935,380
Inter-bank loans		3,906,439	3,892,376
Off-shore loans		20,442,349	19,902,573
		<u>54,623,350</u>	<u>53,730,329</u>
Other loans:			
Bills bought in foreign currency		2,290,686	2,268,364
Advances for customers on acceptances and guarantees		8,954	1,286
Privately placed corporate bonds		4,134,081	4,097,734
Credit card loans		117,958	117,456
Others		12,106,198	12,014,977
		<u>18,657,877</u>	<u>18,499,817</u>
		<u>214,151,616</u>	<u>209,191,058</u>
Less:			
Allowance for loan losses		(3,278,721)	
Present value discount		(10,621)	
Deferred loan origination costs and fees		(4,648)	
	₩	<u>210,857,626</u>	

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**9. Loans Measured at Amortized Cost, Continued**

		<b>December 31, 2021</b>	
		Amortized cost	Fair value
Loans in Korean won:			
Loans for working capital	₩	63,555,754	61,980,947
Loans for facility development		60,215,183	59,032,685
Loans for households		310,800	306,840
Inter-bank loans		2,787,493	2,598,921
Others		1,744	-
		<u>126,870,974</u>	<u>123,919,393</u>
Loans in foreign currencies:			
Loans		24,531,460	24,186,081
Inter-bank loans		2,170,975	2,170,110
Off-shore loans		16,602,690	16,193,012
		<u>43,305,125</u>	<u>42,549,203</u>
Other loans:			
Bills bought in foreign currency		2,776,677	2,774,875
Advances for customers on acceptances and guarantees		6,408	1,438
Privately placed corporate bonds		2,500,388	2,599,374
Credit card loans		120,536	119,739
Others		6,927,185	6,791,561
		<u>12,331,194</u>	<u>12,286,987</u>
		<u>182,507,293</u>	<u>178,755,583</u>
Less:			
Allowance for loan losses		(3,312,276)	
Present value discount		(15,881)	
Deferred loan origination costs and fees		3,219	
	₩	<u>179,182,355</u>	

(2) Changes in allowance for loan losses for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>		
		Lifetime expected credit losses		
		12-month expected credit loss	Non credit-impaired	Credit-impaired
	₩			Total
Beginning balance		381,569	1,334,840	1,595,867
Transfer to 12-month expected credit loss		23,976	(13,013)	(10,963)
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired loans		(185,237)	205,833	(20,596)
Transfer to credit-impaired loans		(72,498)	(198,266)	270,764
Provision for (reversal of) loss allowance		182,941	(120,955)	460,358
Write-offs		-		(86,745)
Recovery		-		20,782
Sale		(136)		(148,285)
Debt-to-equity swap		-		(355,903)
Foreign currency translation		3,094	41,416	10,722
Other		2,957	(33,501)	(10,300)
Ending balance	₩	<u>336,666</u>	<u>1,216,354</u>	<u>1,725,701</u>

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**9. Loans Measured at Amortized Cost, Continued**

		2021			
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	662,190	665,018	1,839,870	3,167,078
Transfer to 12-month expected credit loss		3,453	(3,453)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired loans		(2,108,992)	2,108,992	-	-
Transfer to credit-impaired loans		(1,400,952)	(6,603)	1,407,555	-
Provision for (reversal of) loss allowance		3,250,579	(1,479,207)	(1,148,333)	623,039
Write-offs		-	(1,844)	(34,640)	(36,484)
Recovery		-	-	57,778	57,778
Sale		(55)	-	(195,397)	(195,452)
Debt-to-equity swap		-	-	(402,680)	(402,680)
Foreign currency translation		15,037	7,948	39,620	62,605
Other		(39,691)	43,989	32,094	36,392
Ending balance	₩	381,569	1,334,840	1,595,867	3,312,276

(3) Losses related to loans measured at amortized cost for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Provision for loan losses	₩ (522,344)	(621,071)
Gains on disposal of loan	32,313	36,152
	₩ (490,031)	(584,919)

(4) Changes in net deferred loan origination costs and fees for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 3,219	(2,188)
New deferrals	(6,737)	(7,578)
Amortization	(1,130)	12,985
Ending balance	₩ (4,648)	3,219

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**10. Derivative Financial Instruments**

The Group's derivative financial instruments consist of trading derivatives and hedging derivatives, depending on the nature of each transaction. The Group enters into hedging derivative transactions mainly for the purpose of hedging risk related to changes in fair values of the underlying assets and liabilities and future cash flows.

The Group enters into trading derivative transactions such as futures, forwards, swaps and options for arbitrage transactions by speculating on the future value of the underlying asset. Trading derivative transactions include contracts with the Group's clients and its liquidation position.

For the purpose of hedging the exposure to the variability of fair values and future cash flows of funds in Korean won by changes in interest rate, the Group mainly uses interest swaps or currency swaps. The main counterparties are foreign financial institutions and local banks. In addition, to hedge the exposure to the variability of fair values of bonds in foreign currencies by changes in interest rate or foreign exchange rate, the Group mainly uses interest swaps or currency swaps.

The Group applies net investment hedge accounting by designating non-derivative financial instruments as hedging instruments and any gain or loss on the hedging instruments relating to the effective portion of the hedge is recognised in other comprehensive income and accumulated in the foreign currency translation reserve.

Gains and losses on the hedging instrument accumulated in the foreign currency translation reserve are reclassified to profit or loss on the disposal or partial disposal of the foreign operation.

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**10. Derivative Financial Instruments, Continued**

- (1) The notional amounts outstanding for derivative contracts and the carrying amounts of the derivative financial instruments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>			
		Notional amounts (*1)		Carrying amounts (*1)	
		Buy	Sell	Assets	Liabilities
Trading purpose derivative financial instruments:					
Interest rate					
Futures	₩	-	1,232,323	-	-
Forwards		-	50,000	1,384	-
Swaps		293,780,901	293,397,190	1,570,043	2,054,643
Options		7,881,911	14,728,387	473,586	536,364
		<u>301,662,812</u>	<u>309,407,900</u>	<u>2,045,013</u>	<u>2,591,007</u>
Currency					
Forwards		43,253,318	20,120,036	2,434,017	1,326,656
Swaps		59,221,890	75,130,783	4,272,602	6,138,009
Options		330,066	329,052	1,991	6,452
		<u>102,805,274</u>	<u>95,579,871</u>	<u>6,708,610</u>	<u>7,471,117</u>
Stock					
Options		48,904	493,689	12,762	6,003
Allowance and other adjustments		-	-	(14,647)	(1,447)
		<u>404,516,990</u>	<u>405,481,460</u>	<u>8,751,738</u>	<u>10,066,680</u>
Hedging purpose derivative financial instruments:					
Interest rate (*2)					
Futures		-	87,951	-	-
Swaps		31,358,989	31,358,989	50,214	542,258
		<u>31,358,989</u>	<u>31,446,940</u>	<u>50,214</u>	<u>542,258</u>
Currency					
Forwards		-	11,251,200	408,031	22,385
Swaps		10,217,257	11,831,985	181,144	781,730
		<u>10,217,257</u>	<u>23,083,185</u>	<u>589,175</u>	<u>804,115</u>
Allowance and other adjustments		-	-	(155)	(3,803)
		<u>41,576,246</u>	<u>54,530,125</u>	<u>639,234</u>	<u>1,342,570</u>
	₩	<u><u>446,093,236</u></u>	<u><u>460,011,585</u></u>	<u><u>9,390,972</u></u>	<u><u>11,409,250</u></u>

(\*1) The notional amounts, derivative financial assets and liabilities of Daewoo Shipbuilding & Marine Engineering Co., Ltd. classified as assets and liabilities held for sale as of December 31, 2022, are excluded.

(\*2) The expected maximum period for which derivative contracts, applied the cash flow hedge accounting, are exposed to risk of cash flow fluctuation is until August 28, 2029.

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10. Derivative Financial Instruments, Continued

		December 31, 2021			
		Notional amounts (*1)		Carrying amounts (*1)	
		Buy	Sell	Assets	Liabilities
Trading purpose derivative financial instruments:					
Interest rate					
Futures	₩	-	702,640	-	-
Swaps		244,254,542	244,041,721	858,605	485,957
Options		8,369,912	14,664,093	305,022	377,850
		252,624,454	259,408,454	1,163,627	863,807
Currency					
Futures		17,783	-	-	-
Forwards		60,581,549	53,453,895	1,775,680	1,135,352
Swaps		57,998,582	70,368,555	1,620,744	2,497,574
Options		377,494	375,834	889	578
		118,975,408	124,198,284	3,397,313	3,633,504
Stock					
Options		53,753	50,736	10,911	221
Allowance and other adjustments		-	-	(11,531)	(850)
		371,653,615	383,657,474	4,560,320	4,496,682
Hedging purpose derivative financial instruments:					
Interest rate (*2)					
Futures		-	69,707	-	-
Swaps		24,135,814	24,135,534	331,117	45,477
		24,135,814	24,205,241	331,117	45,477
Currency					
Swaps		9,073,004	9,023,151	210,660	214,707
Allowance and other adjustments		-	-	(135)	(4,028)
		33,208,818	33,228,392	541,642	256,156
	₩	404,862,433	416,885,866	5,101,962	4,752,838

(\*1) The notional amounts, derivative financial assets and liabilities of Daewoo Shipbuilding & Marine Engineering Co., Ltd., KDB Life Insurance Co., Ltd. and Daewoo Engineering & Construction Co., Ltd. classified as assets and liabilities held for sale as of December 31, 2021, are excluded.

(\*2) The expected maximum period for which derivative contracts, applied the cash flow hedge accounting, are exposed to risk of cash flow fluctuation is until April 29, 2025.

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## 10. Derivative Financial Instruments, Continued

(2) The notional amounts outstanding for the hedging instruments by period as of December 31, 2022 and 2021 are as follows:

		December 31, 2022					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Interest rate:							
Swaps	₩	38,019	1,697,045	4,319,670	20,712,419	4,591,836	31,358,989
Currency:							
Swaps		316,782	311,512	3,339,781	6,600,909	1,263,001	11,831,985
		December 31, 2021					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Interest rate:							
Swaps	₩	306,695	1,441,003	1,437,526	17,596,972	3,353,618	24,135,814
Currency:							
Swaps		-	17,178	2,412,941	5,159,516	1,483,369	9,073,004

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**10. Derivative Financial Instruments, Continued**

(3) Details of the balances of the hedging instruments by risk type as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>					
	Notional amounts		Balances		Changes in fair value for 2022
	Buy	Sell	Assets	Liabilities	
Cash flow hedge accounting:					
Interest rate risk					
Swaps	₩ 88,711	88,711	-	-	5,044
Currency risk					
Forwards	-	71,343	-	3,946	(2,706)
Swaps	-	211,105	3,268	6,221	12,053
	-	282,448	3,268	10,167	9,347
	88,711	371,159	3,268	10,167	14,391
Fair value hedge accounting:					
Interest rate risk					
Futures	-	87,951	-	-	-
Swaps	31,270,278	31,270,278	50,214	542,258	(1,586,513)
	31,270,278	31,358,229	50,214	542,258	(1,586,513)
Currency risk					
Forwards	-	11,179,857	408,031	18,439	404,381
Swaps	10,217,257	11,620,880	177,876	775,509	(635,435)
	10,217,257	22,800,737	585,907	793,948	(231,054)
	41,487,535	54,158,966	636,121	1,336,206	(1,817,567)
₩	41,576,246	54,530,125	639,389	1,346,373	(1,803,176)
<b>December 31, 2021</b>					
	Notional amounts		Balances		Changes in fair value for 2021
	Buy	Sell	Assets	Liabilities	
Cash flow hedge accounting:					
Interest rate risk					
Swaps	₩ 82,985	82,985	-	-	2,035
Fair value hedge accounting:					
Interest rate risk					
Futures	-	69,707	-	-	-
Swaps	24,052,829	24,052,549	331,117	45,477	(699,622)
	24,052,829	24,122,256	331,117	45,477	(699,622)
Currency risk					
Swaps	9,073,004	9,023,151	210,660	214,707	(469,520)
	33,125,833	33,145,407	541,777	260,184	(1,169,142)
₩	33,208,818	33,228,392	541,777	260,184	(1,167,107)

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**10. Derivative Financial Instruments, Continued**

(4) Details of the balances of the hedged items by risk type as of December 31, 2022 and 2021 are as follows:

		December 31, 2022					
		Carrying amounts		Adjustments from fair value hedge accounting		Changes in fair value for 2022	Other comprehen- sive income for cash flow hedge
		Assets	Liabilities	Assets	Liabilities		
Cash flow hedge accounting:							
Interest rate risk							
Debt debentures	₩	-	88,711	-	-	-	7,240
Currency risk							
Securities measured at FVOCI		143,206	-	-	-	-	5,719
		143,206	88,711	-	-	-	12,959
Fair value hedge accounting:							
Interest rate risk							
Securities measured at FVOCI		4,610,088	-	(334,845)	-	(347,090)	-
Debt debentures		-	25,497,582	-	(1,900,489)	1,890,055	-
Other liabilities (Deposits, etc.)		-	107,660	-	(19,070)	22,323	-
		4,610,088	25,605,242	(334,845)	(1,919,559)	1,565,288	-
Currency risk (*)							
Securities Measured at FVTPL		339,525	-	(7,726)	-	(8,787)	-
Securities measured at FVOCI		802,267	-	38,607	-	19,135	-
Securities Measured at Amortized Cost		762,435	-	31,178	-	8,412	-
Loans		104,321	-	2,203	-	2,203	-
Debt debentures		-	9,816,395	-	(89,179)	611,221	-
		2,008,548	9,816,395	64,262	(89,179)	632,184	-
		6,618,636	35,421,637	(270,583)	(2,008,738)	2,197,472	-
	₩	6,761,842	35,510,348	(270,583)	(2,008,738)	2,197,472	12,959

(\*) Firm commitments, etc designated as hedged item are excluded.

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**10. Derivative Financial Instruments, Continued**

		December 31, 2021					Other comprehen- sive income for cash flow hedge
		Carrying amounts		Adjustments from fair value hedge accounting		Changes in fair value for 2021	
		Assets	Liabilities	Assets	Liabilities		
Cash flow hedge accounting:							
Interest rate risk							
Debt debentures	₩	-	82,985	-	-	-	1,930
Fair value hedge accounting:							
Interest rate risk							
Securities measured at							
FVOCI		3,459,504	-	(122,926)	-	(67,612)	-
Debt debentures		-	21,621,572	-	(2,069)	643,184	-
Other liabilities							
(Deposits, etc.)		-	121,593	-	3,043	9,589	-
		3,459,504	21,743,165	(122,926)	974	585,161	-
Currency risk							
Debt debentures		-	9,012,029	-	170,860	504,818	-
		3,459,504	30,755,194	(122,926)	171,834	1,089,979	-
	₩	3,459,504	30,838,179	(122,926)	171,834	1,089,979	1,930

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**10. Derivative Financial Instruments, Continued**

- (5) Details of hedge ineffectiveness recognized in profit or loss from derivatives for the years ended December 31, 2022 and 2021 is as follows:

		<b>2022</b>	<b>2021</b>
Interest rate risk	₩	(21,225)	(114,461)
Currency risk (*)		15,484	35,298
	₩	<u>(5,741)</u>	<u>(79,163)</u>

(\*) The case that firm commitments, etc. are designated as hedged items is excluded.

- (6) The summary of the amounts that have affected the statement of comprehensive income as a result of applying cash flow hedge accounting for the years ended December 31, 2022 and 2021 is as follows:

		<b>2022</b>		
		Change in the value of the hedging instrument recognized in other comprehensive income	Hedge ineffectiveness recognized in profit or loss (*)	Amount reclassified from other comprehensive income to profit or loss (*)
Interest rate risk and currency risk	₩	14,280	111	-

(\*) Recognized in gains or losses related to hedging purpose derivatives.

		<b>2021</b>		
		Change in the value of the hedging instrument recognized in other comprehensive income	Hedge ineffectiveness recognized in profit or loss (*)	Amount reclassified from other comprehensive income to profit or loss (*)
Interest rate risk and currency risk	₩	1,883	152	-

(\*) Recognized in gains or losses related to hedging purpose derivatives.

- (7) Details of net investments in foreign operations for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>		
		Changes in fair value	Other comprehensive income (loss) for hedges of a net investment in a foreign operation	
Currency (foreign exchange risk)	₩	67,754	(96,874)	

		<b>2021</b>		
		Changes in fair value	Other comprehensive income (loss) for hedges of a net investment in a foreign operation	
Currency (foreign exchange risk)	₩	78,096	(29,120)	

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**10. Derivative Financial Instruments, Continued**

(8) Detail of hedging instruments in hedge of net investment in a foreign operation as of December 31, 2022 and 2021 is as follows:

		<b>December 31, 2022</b>		
		Book value	Changes in fair value for 2022	Change in the value of the hedging instrument recognized in other comprehensive loss for 2022
				Hedge ineffectiveness recognized in profit or loss for 2022
Debtentures in foreign currencies	₩	1,097,225	(67,754)	(67,754)
				-
		<b>December 31, 2021</b>		
		Book value	Changes in fair value for 2021	Change in the value of the hedging instrument recognized in other comprehensive income for 2021
				Hedge ineffectiveness recognized in profit or loss for 2021
Debtentures in foreign currencies	₩	1,006,263	(78,095)	(78,095)
				-

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11. Investments in Associates

(1) The market value of marketable investments in associates as of December 31, 2022 and 2021 are as follows:

		Market value		Carrying amounts	
		December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Korea Electric Power Co., Ltd.	₩	4,604,929	4,668,299	13,341,271	20,982,893
HMM Co., Ltd.		1,978,446	2,722,261	1,974,499	3,305,985
KG Dongbu Steel Co., Ltd. (*)		-	15,966	-	17,421
HANJIN KAL		264,477	433,616	352,761	509,168
Korean Air Lines Co., Ltd.		280,906	-	369,789	

(\*) KG Dongbu Steel Co., Ltd. is excluded from the Group's subsidiaries due to the disposal of shares for the year ended December 31, 2022.

(2) Changes in investments in associates for the years ended December 31, 2022 and 2021 are as follows:

2022										
		January 1, 2022	Acquisition / transfer	Disposal / transfer	Share of profit (loss)	Impairment loss (*)	Share of other comprehen- sive income (loss)	Dividends	Others	December 31, 2022
Korea Electric Power Co., Ltd.	₩	20,982,893	-	-	(8,050,704)	-	402,401	-	6,681	13,341,271
Korea Tourism Organization		274,365	-	-	(12,551)	-	8,799	-	-	270,613
HMM Co., Ltd.		3,305,985	-	-	2,082,593	(3,528,974)	175,614	(60,720)	1	1,974,499
Korea Infrastructure Fund II		228,929	-	(183)	1,307	-	-	(10,791)	-	219,262
Korea Ocean Business Corporation		2,117,139		-	(439,129)	-	15,682	-	(350)	1,693,342
HANJIN KAL		509,168	-	-	72,186	(247,283)	18,680	-	10	352,761
Korean Air Lines Co., Ltd.		-	330,477	-	20,152	-	17,085	-	2,075	369,789
Others		4,129,591	612,483	(452,198)	187,833	(11,846)	24,481	(247,216)	52,799	4,295,927
	₩	31,548,070	942,960	(452,381)	(6,138,313)	(3,788,103)	662,742	(318,727)	61,216	22,517,464

(\*) For the year ended December 31, 2022, the Group recognized impairment losses amounting to ₩247,283 million due to a decrease in value in use resulting from the deterioration of operating cash flows for HANJIN KAL. The Group recognized impairment losses amounting to ₩3,528,974 million for HMM Co., Ltd. for the year ended December 31, 2022, due to a decrease in recoverable amount resulting from the decrease in expected cash flow from the shares held by the Bank. The Group recognized impairment losses amounting to ₩11,846 million for the year ended December 31, 2022, based on objective evidence of impairment, such as a decrease in the net asset value due to a decrease in the fair value of assets held for Blue Ocean Corporate's Financial Stabilization Private Equity Fund No.1, and 14 other companies. The recoverable amount was ₩2,418,729 million as of December 31, 2022.

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**11. Investments in Associates, Continued**

		2021								
		January 1, 2021	Acquisition / transfer	Disposal / transfer	Share of profit (loss)	Impairment loss (*)	Share of other comprehen- sive income (loss)	Dividends	Others	December 31, 2021
Korea Electric Power Co., Ltd.	₩	22,801,747	-	-	(1,748,894)	-	184,270	(256,862)	2,632	20,982,893
Korea Tourism Organization		315,812	-	-	(46,356)	-	4,909	-	-	274,365
HMM Co., Ltd.		-	2,658,000	-	924,528	-	69,453	-	(345,996)	3,305,985
Korea Infrastructure Fund II		240,389	-	(6,911)	5,661	-	-	(10,210)	-	228,929
Korea Ocean Business Corporation		1,196,393	-	-	924,696	-	18,236	-	(22,186)	2,117,139
HANJIN KAL		500,000	-	-	4,738	-	(3,443)	-	7,873	509,168
Others		4,174,146	957,467	(779,741)	698,077	(46,997)	56,159	(639,784)	(289,736)	4,129,591
	₩	29,228,487	3,615,467	(786,652)	762,450	(46,997)	329,584	(906,856)	(647,413)	31,548,070

(\*) The Group recognized ₩46,997 million as impairment losses considering the decline in net asset values due to the decrease in fair value of assets held as indications of impairment for Unison Savor Private Equity Fund and 17 others for the year ended December 31, 2021. Recoverable amount is ₩193,487 million as of December 31, 2021.

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11. Investments in Associates, Continued

(3) The key financial information of associates invested and ownership ratios as of and for the years ended December 31, 2022 and 2021 are as follows:

	December 31, 2022									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income (loss)	Ownership (%)
Korea Electric Power Co., Ltd.	Korea	December	Electricity generation	₩ 234,804,994	192,804,738	42,000,256	71,257,863	(24,429,108)	(23,182,239)	32.90
Korea Tourism Organization			Culture and tourism							
HMM Co., Ltd.	Korea	December	administration	1,201,900	393,608	808,292	737,973	(28,798)	(8,610)	43.58
GM Korea Company (*)	Korea	December	Shipping	25,973,455	5,285,543	20,687,912	18,582,770	10,085,271	10,655,184	20.69
Korea Infrastructure Fund II	Korea	December	Manufacturing	5,916,955	4,503,620	1,413,335	9,013,561	282,760	282,760	17.02
Korea Ocean Business Corporation	Korea	December	Financial investment	829,121	65,397	763,724	62,465	19,105	19,105	26.67
HANJIN KAL (*)			Financial investment	11,782,946	4,393,822	7,389,124	324,012	(1,986,514)	(1,915,571)	21.78
	Korea	December	Holding company	3,915,078	1,339,021	2,576,057	200,336	659,568	851,925	10.58
Korean Air Lines Co., Ltd. (*)	Korea	December	Air passenger transportation	28,997,701	19,705,241	9,292,460	14,096,095	1,728,363	2,268,959	3.32

(\*) Equity method is applied to GM Korea Company, HANJIN KAL and Korean Air Lines Co., Ltd. even though the Group's shareholding is less than 20%, because the Group is considered to have significant influence over GM Korea Company, HANJIN KAL and Korean Air Lines Co., Ltd. by exercising rights to elect board of directors.

	December 31, 2021									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Profit (loss) for the year	Total comprehensive income (loss)	Ownership (%)
Korea Electric Power Co., Ltd.	Korea	December	Electricity generation	₩ 211,108,870	145,797,021	65,311,849	60,574,819	(5,315,055)	(4,754,046)	32.90
Korea Tourism Organization			Culture and tourism							
	Korea	December	administration	1,130,031	312,593	817,438	465,281	(71,016)	(59,751)	43.58
HMM Co., Ltd.	Korea	December	Shipping	17,876,100	7,517,806	10,358,294	13,794,148	5,337,056	5,696,643	20.69
GM Korea Company (*)	Korea	December	Manufacturing	5,013,939	3,496,897	1,517,042	6,973,860	(166,475)	(166,475)	17.02
Korea Infrastructure Fund II	Korea	December	Financial investment	851,153	51,177	799,976	70,165	40,891	40,891	26.67
Korea Ocean Business Corporation			Financial investment							
	Korea	December	investment	15,040,759	5,845,062	9,195,697	5,499,512	4,187,673	4,207,691	22.11
HANJIN KAL (*)			Holding company							
	Korea	December	company	3,754,742	1,930,524	1,824,218	395,278	17,234	46,260	10.66

(\*) Equity method is applied to GM Korea Company and HANJIN KAL, even though the Group's shareholding is less than 20%, because the Group is considered to have significant influence over GM Korea Company and HANJIN KAL by exercising rights to elect board of directors.

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**12. Property and Equipment**

Changes in property and equipment for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>					
		January 1, 2022	Acquisition/ depreciation	Disposal	Reclassifi- cation (*2)	Foreign exchange differences	December 31, 2022
Acquisition cost:							
Land	₩	510,091	113	(585)	(376,762)	(1)	132,514
Buildings and structures		998,802	1,181	(1,979)	(167,603)	97	830,777
Leasehold improvements		42,689	4,409	(2,159)	2,726	(79)	47,590
Vehicles		2,999	357	(718)	2,830	75	5,647
Equipment		89,099	6,554	(3,362)	52,799	(447)	144,321
Construction in progress		48,495	7,559	(72)	(52,534)	-	2,339
Right-of-use assets		198,121	102,506	(149,113)	38,575	3,566	193,699
Others		334,044	5,514	(1,203)	(132,643)	(6)	205,890
		<u>2,224,340</u>	<u>128,193</u>	<u>(159,191)</u>	<u>(632,612)</u>	<u>3,205</u>	<u>1,562,777</u>
Accumulated depreciation: (*1)							
Buildings and structures		319,455	21,863	-	(49,837)	35	314,507
Leasehold improvements		36,172	3,192	(1,987)	1,400	(411)	38,298
Vehicles		5,156	264	(714)	2,323	53	4,350
Equipment		72,474	9,341	(2,804)	48,265	(221)	117,923
Construction in progress		2,810	-	-	(2,810)	-	-
Right-of-use assets		67,015	44,223	(71,458)	18,137	1,130	63,086
Others		252,050	15,508	(863)	(94,621)	70	166,049
		<u>755,132</u>	<u>94,391</u>	<u>(77,826)</u>	<u>(77,143)</u>	<u>656</u>	<u>704,213</u>
Accumulated impairment losses:							
Land		3,024	-	-	-	-	3,024
Buildings and structures		34,641	1,124	-	532	-	36,297
Vehicles		39	5	-	-	-	44
Equipment		905	94	(119)	-	-	880
Others		9,953	272	(87)	-	-	10,138
		<u>48,562</u>	<u>1,495</u>	<u>(206)</u>	<u>532</u>	<u>-</u>	<u>50,383</u>
	₩	<u>1,420,646</u>	<u>32,307</u>	<u>(81,159)</u>	<u>(556,001)</u>	<u>2,549</u>	<u>808,181</u>

(\*1) The amounts include government grants.

(\*2) The property and equipment of KDB Life Insurance Co., Ltd. are reclassified from assets held for sale as of December 31, 2022.

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**12. Property and Equipment, Continued**

		2021					
		January 1, 2021	Acquisition/ depreciation	Disposal	Reclassifi- cation (*2)	Foreign exchange differences	December 31, 2021
Acquisition cost:							
Land	₩	630,688	132	(62)	(120,671)	-	510,091
Buildings and structures		1,203,197	3,585	(744)	(207,811)	15	998,802
Leasehold improvements		43,674	3,707	(5,615)	54	721	42,689
Vehicles		90,788	121	(111)	(87,933)	52	2,999
Equipment		151,821	9,307	(2,944)	(68,949)	137	89,099
Construction in progress		110,391	22,433	(1,350)	(82,599)	-	48,495
Right-of-use assets		410,760	122,850	(27,065)	(301,477)	(7,598)	198,121
Others		692,443	10,865	(36,271)	(333,182)	204	334,044
		3,333,762	173,000	(74,162)	(1,202,568)	(6,469)	2,224,340
Accumulated depreciation: (*1)							
Buildings and structures		383,452	24,646	(311)	(92,865)	14	319,455
Leasehold improvements		37,525	3,081	(5,085)	-	651	36,172
Vehicles		83,159	252	(109)	(78,189)	32	5,156
Equipment		124,022	6,026	(2,404)	(55,523)	160	72,474
Construction in progress		2,887	-	-	(77)	-	2,810
Right-of-use assets		105,598	32,515	(20,429)	(54,165)	536	67,015
Others		547,180	22,285	(35,567)	(283,844)	167	252,050
		1,283,823	88,805	(63,905)	(564,663)	1,560	755,132
Accumulated impairment losses:							
Land		11,721	-	-	(8,697)	-	3,024
Buildings and structures		40,190	1,664	(10)	(7,203)	-	34,641
Vehicles		26	13	-	-	-	39
Equipment		852	58	(5)	-	-	905
Construction in progress		20,163	-	-	(20,163)	-	-
Others		9,667	425	(139)	-	-	9,953
		82,619	2,160	(154)	(36,063)	-	48,562
₩		1,967,320	82,035	(10,103)	(601,842)	(8,029)	1,420,646

(\*1) The amounts include government grants.

(\*2) The property and equipment of Daewoo Engineering & Construction Co., Ltd. are reclassified as assets held for sale as of December 31, 2021.

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**13. Investment Property**

Changes in investment property for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>			
		January 1, 2022	Acquisition/ depreciation/ impairment	Disposal	December 31, 2022
Acquisition cost:					
Land	₩	60,651	-	-	69,223
Buildings and structures		59,356	70	-	155,021
		120,007	70	-	224,244
Accumulated depreciation:					
Buildings and structures		33,397	4,382	-	67,728
Accumulated impairment losses:					
Land		1,197	-	-	1,197
Buildings and structures		1,776	-	-	3,643
		2,973	-	-	4,840
	₩	83,637	(4,312)	-	151,676

(\*) The investment property of KDB Life Insurance Co., Ltd. are reclassified from assets held for sale as of December 31, 2022.

		<b>2021</b>			
		January 1, 2021	Acquisition/ depreciation/ impairment	Disposal	December 31, 2021
Acquisition cost:					
Land	₩	211,192	-	-	60,651
Buildings and structures		357,013	-	-	59,356
		568,205	-	-	120,007
Accumulated depreciation:					
Buildings and structures		88,113	2,209	-	33,397
Accumulated impairment losses:					
Land		8,321	-	-	1,197
Buildings and structures		11,034	-	-	1,776
		19,355	-	-	2,973
	₩	460,737	(2,209)	-	83,637

(\*) The investment property of Daewoo Engineering & Construction Co., Ltd. are reclassified as assets held for sale as of December 31, 2021.

The fair value of the Group's investment property, as determined on the basis of valuation by an independent appraiser, amounts to ₩ 171,447 million and ₩98,784 million as of December 31, 2022 and 2021, respectively. Additionally, fair value of investment in property is classified as level 3 according to the fair value hierarchy in Note 49.

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**14. Intangible Assets**

Changes in intangible assets for the years ended December 31, 2022 and 2021 are as follows:

2022									
	January 1, 2022	Acquisition	Disposal	Reclassifi- cation (*)	Amortiza- tion	Impairment loss	Foreign exchange differences	Others	December 31, 2022
Goodwill	₩ 12,541	27,272	-	-	-	-	(418)	-	39,395
Membership	15,363	920	(1,523)	(947)	-	-	470	-	14,283
Others	148,293	33,405	(78)	20,902	(59,053)	(103)	(388)	6,852	149,830
	₩ 176,197	61,597	(1,601)	19,955	(59,053)	(103)	(336)	6,852	203,508

(\*) The intangible assets of KDB Life Insurance Co., Ltd. are reclassified from assets held for sale as of December 31, 2022.

2021									
	January 1, 2021	Acquisition	Disposal	Reclassifi- cation (*)	Amortiza- tion	Impairment loss	Foreign exchange differences	Others	December 31, 2021
Goodwill	₩ 12,402	-	(26)	(542)	-	-	707	-	12,541
Customers related	125,965	-	-	(125,965)	-	-	-	-	-
Membership	30,525	1,431	(1,517)	(15,099)	-	-	23	-	15,363
Others	539,048	15,356	(5,767)	(344,447)	(56,262)	-	88	277	148,293
	₩ 707,940	16,787	(7,310)	(486,053)	(56,262)	-	818	277	176,197

(\*) The intangible assets of Daewoo Engineering & Construction Co., Ltd. are reclassified as assets held for sale as of December 31, 2021.

**15. Other Assets**

Other assets as of December 31, 2022 and 2021 are as follows:

		December 31, 2022	December 31, 2021
Accounts receivable	₩	2,831,741	3,454,691
Domestic exchange receivables		3,745,979	1,793,452
Accrued income		1,384,170	626,629
Guarantee deposits		322,766	230,379
Trade accounts receivables		28,135	316,058
Inventories		8,337	25,914
Prepaid expenses		78,082	59,959
Advance payments		30,205	57,694
Financial guarantee asset		25,826	20,127
Others		1,058,466	69,039
		9,513,707	6,653,942
Allowance for credit losses		(79,925)	(75,578)
Present value discount		(5,304)	(4,629)
	₩	9,428,478	6,573,735

(\*) The carrying amounts of financial assets included in other assets above amounted to ₩8,338,617 million and ₩6,441,337 million as of December 31, 2022 and 2021, respectively, and their fair value amounted to ₩8,266,777 million and ₩6,385,842 million as of December 31, 2022 and 2021, respectively.

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**16. Assets and Liabilities Held for Sale**

- (1) Classification of Daewoo Engineering & Construction Co., Ltd., the Group's subsidiary, as assets and liabilities held for sale

As the Group and Hyundai Heavy Industries Co., Ltd. ("Hyundai Heavy Industries") made the investment contract (hereinafter, "the contract") with an investment in kind on March 8, 2019 and proceeded with the sale for attracting investment in Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("Daewoo Shipbuilding & Marine Engineering") of the Group's subsidiary, the Group classified the disposal group of Daewoo Shipbuilding & Marine Engineering as assets and liabilities held for sale and the gain or loss related to Daewoo Shipbuilding & Marine Engineering as profit from discontinued operations.

The European Commission did not approve the merger between Korea Shipbuilding & Marine Engineering Co., Ltd. and Daewoo Shipbuilding & Marine Engineering on January 13, 2022. As a result of the disapproval, the contract's precondition including governmental permission of different countries was not satisfied and the Group and Korea Shipbuilding & Marine Engineering Co., Ltd. cancelled this contract on March 8, 2022.

On September 26, 2022 Hanwha Aerospace Co., Ltd. and five other companies and Daewoo Shipbuilding & Marine Engineering entered into an investment agreement and based on the agreement, the Group classified the disposal group of Daewoo Shipbuilding & Marine Engineering as assets and liabilities held for sale and the gain or loss related to Daewoo Shipbuilding & Marine Engineering as profit (loss) from discontinued operations.

- (2) KDB Life Insurance Co., Ltd., the Group's subsidiary, excluded from assets and liabilities held for sale

Before the previous year, the Group selected JC Partners, local private equity firm, as the preferred bidder for the shares of KDB Life Insurance Co., Ltd. held by KDB Consus Value Private Equity Fund, the Group's subsidiary, and is conducting sale processes based on the agreement of purchase and sale of shares made on December 31, 2020. The Group classified a disposal group of KDB Life Insurance Co., Ltd. as assets and liabilities held for sale and profit or loss on KDB Life Insurance Co., Ltd. as profit or loss from discontinued operations.

For the year ended December 31, 2022, the Group cancelled the agreement of purchase and sale of shares with JC Partners due to the expiration of the transaction closing date. The disposal group of KDB Life Insurance Co., Ltd. were excluded from assets and liabilities held for sale. The gain or loss related to KDB Life Insurance Co., Ltd. was reclassified from profit from discontinued operations to profit from discontinuing operations and the statement of comprehensive income presented for comparative purpose was restated.

- (3) Sale of Daewoo Engineering & Construction Co., Ltd., the Group's subsidiary, completed

The Group selected Jungheung consortium as the preferred bidder for the shares of Daewoo Engineering & Construction Co., Ltd. held by KDB Investment PEF No.1, the Group's subsidiary on July 5, 2021, and is conducting sale processes based on the agreement of purchase and sale of shares made on December 9, 2021. The Group classified a disposal group of Daewoo Engineering & Construction Co., Ltd. as assets and liabilities held for sale and profit or loss on Daewoo Engineering & Construction Co., Ltd. as profit or loss from discontinued operations.

For the year ended December 31, 2022, the sale of Daewoo Engineering & Construction Co., Ltd., the Group's sub-subsidiary, was completed and the carrying amount of KDB Investment PEF No.1 was liquidated. Accordingly Daewoo Engineering & Construction Co., Ltd. and KDB Investment PEF No.1 were excluded from the Group.

- (4) Classification of Daehan Shipbuilding Co., Ltd., the Group's subsidiary, as assets and liabilities held for sale  
On May 20, 2022, Daehan Shipbuilding Co., Ltd. ("Daehan Shipbuilding") and KHI consortium entered into an investment contract (hereinafter, "the contract") to increase the paid-in capital for the purpose of allowing KHI consortium to acquire the status of a major shareholder of Daehan Shipbuilding. KHI consortium completed payment for the shares on August 31, 2022, and Daehan Shipbuilding was subsequently excluded from the Group.

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**16. Assets and Liabilities Held for Sale, Continued**

(5) Assets and liabilities held for sale as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Assets held for sale		
Cash and cash equivalents	₩ 1,058,540	4,568,551
Securities measured at FVTPL	31,809	4,853,630
Securities measured at FVOCI	8,087	7,505,861
Securities measured at amortized cost	16	6,541,467
Investments in associates	3,759	130,022
Property and equipment	4,167,237	4,202,414
Investment property	-	395,542
Intangible assets	1,532	100,219
Other assets	6,781,559	11,999,045
	<u>12,052,539</u>	<u>40,296,751</u>
Liabilities held for sale		
Policy reserves	-	17,742,225
Borrowings	2,449,239	2,619,675
Debentures	121,954	1,389,298
Demand repayment share	-	36,066
Derivative financial instruments	227,912	108,571
Other liabilities	6,572,697	11,104,089
	<u>9,371,802</u>	<u>32,999,924</u>
Net assets	₩ <u>2,680,737</u>	<u>7,296,827</u>

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**16. Assets and Liabilities Held for Sale, Continued**

- (6) Other comprehensive income in relation to assets and liabilities held for sale as of December 31, 2022 and 2021 are as follows:

		<u>December 31, 2022</u>	<u>December 31, 2021</u>
Net gain (loss) on securities measured at FVOCI	₩	(12,095)	(150,723)

- (7) Details of profit and loss from discontinued operations and cash flows from discontinued operating activities for the years ended December 31, 2022 and 2021 are as follows:

		<u>2022</u>	<u>2021</u>
Profit (loss) from discontinued operations			
Profit (loss) before income taxes	₩	(1,139,106)	(779,028)
Income tax expense		(68,683)	260,098
Profit (loss) for the year	₩	<u>(1,070,423)</u>	<u>(1,039,126)</u>
Cash flows from discontinued operations			
Net cash flows from operating activities	₩	(1,167,642)	1,047,011
Net cash flows from investing activities		52,431	9,496
Net cash flows from financing activities		(70,221)	(371,939)
Effects from changes in foreign currency exchange rate for cash and cash equivalents held		(10,169)	5,365
Net cash flows from discontinued operations	₩	<u>(1,195,601)</u>	<u>689,933</u>

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**17. Financial Liabilities Designated at Fair Value Through Profit or Loss**

- (1) Financial liabilities designated at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Debentures	₩	1,131,310	1,636,163
Deposits		338,414	430,981
		<u>1,469,724</u>	<u>2,067,144</u>

Changes in fair value of structured debentures and deposits which hedge accounting are applied, are recognized in profit or loss, but structured debentures with no hedge accounting applied to, are measured at amortized costs. Therefore, such structured debentures, not applied to hedge accounting, have been designated at FVTPL in order to eliminate mismatch in measurements of accounting profit and loss.

- (2) The difference between the carrying amount and contractual cash flow amount of financial liabilities designated at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Carrying amount	₩	1,469,724	2,067,144
Contractual cash flow amount		2,101,133	2,110,955
Difference amount	₩	<u>(631,409)</u>	<u>(43,811)</u>

**18. Deposits**

Deposits as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>		<b>December 31, 2021</b>	
		<u>Amortized cost</u>	<u>Fair value</u>	<u>Amortized cost</u>	<u>Fair value</u>
Deposits in Korean won:					
Demand deposits	₩	122,609	122,609	85,432	85,432
Time and savings deposits		53,970,194	53,909,816	40,145,859	40,109,531
Certificates of deposit		757,471	758,937	342,105	341,901
		<u>54,850,274</u>	<u>54,791,362</u>	<u>40,573,396</u>	<u>40,536,864</u>
Deposits in foreign currencies:					
Demand deposits		2,457,886	2,457,935	2,562,673	2,562,673
Time and savings deposits		4,441,503	4,435,613	5,116,944	5,115,951
Certificates of deposit		6,937,265	6,944,840	4,554,217	4,554,217
		<u>13,836,654</u>	<u>13,838,388</u>	<u>12,233,834</u>	<u>12,232,841</u>
Off-shore deposits in foreign currencies:					
Demand deposits		835,904	835,904	670,777	670,777
Certificates of deposit		765,301	765,794	361,122	360,884
		<u>1,601,205</u>	<u>1,601,698</u>	<u>1,031,899</u>	<u>1,031,661</u>
	₩	<u>70,288,133</u>	<u>70,231,448</u>	<u>53,839,129</u>	<u>53,801,366</u>

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**19. Borrowings**

(1) Borrowings as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Borrowings in Korean won	-	6.35	₩ 7,701,465	7,914,770
Borrowings in foreign currencies	-	6.57	14,962,903	14,882,070
Off-shore borrowings in foreign currencies	0.16	9.40	5,118,598	5,069,938
Share capital repayable on demand	-	-	807,421	820,542
Others	0.05	4.88	1,541,165	1,160,218
			30,131,552	29,847,538
Present value discount			-	
Deferred borrowing costs			(473)	
			₩ 30,131,079	

<b>December 31, 2021</b>				
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Borrowings in Korean won	-	4.62	₩ 8,265,608	7,938,340
Borrowings in foreign currencies	-	5.31	14,286,316	14,265,382
Off-shore borrowings in foreign currencies	-	3.35	2,281,488	2,279,425
Share capital repayable on demand	-	-	1,184,034	1,184,034
Others	0.01	3.29	2,549,509	2,392,122
			28,566,955	28,059,303
Present value discount			(5,744)	
Deferred borrowing costs			(148)	
			₩ 28,561,063	

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**19. Borrowings, Continued**

(2) Borrowings in Korean won before adjusting for deferred borrowing costs as of December 31, 2022 and 2021 are as follows:

<u>Lender</u>	<u>Classification</u>	<u>Annual interest rate (%)</u>		<u>December 31, 2022</u>	<u>December 31, 2021</u>
The Bank of Korea	Borrowings from Bank of Korea	0.25 ~ 1.25	₩	375,350	378,160
Ministry of Economy and Finance	Borrowings from government fund (*)	2.94 ~ 3.23		93,155	108,932
Korea SMEs and Startups Agency	Borrowings from small and medium enterprise promotion fund	0.66 ~ 2.91		57,569	61,240
Ministry of Culture, Sports and Tourism	Borrowings from tourism promotion fund	0.09 ~ 2.44		3,182,920	3,005,749
Korea Energy Agency	Borrowings from fund for rational use of energy	0.25 ~ 1.85		268,659	282,178
Local governments	Borrowings from local small and medium enterprise promotion fund	0.00 ~ 2.88		27,167	27,658
Others	Borrowings from petroleum enterprise fund	0.00 ~ 6.35		3,696,645	4,401,691
			₩	<u>7,701,465</u>	<u>8,265,608</u>

(\*) Borrowings from government fund are subordinated borrowings.

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**19. Borrowings, Continued**

(3) Borrowings and off-shore borrowings in foreign currencies before adjusting for deferred borrowing costs as of December 31, 2022 and 2021 are as follows:

<u>Lender</u>	<u>Classification</u>	<u>Annual interest rate (%)</u>		<u>December 31, 2022</u>	<u>December 31, 2021</u>
Mizuho and others	Bank loans from foreign funds	3M Libor + 0.29 ~ 6M Libor + 0.24	₩	1,394,030	355,650
Ministry of Economy and Finance	Exchange equalization fund borrowings in foreign currencies	3M Libor + 0.65 ~ 3M Libor + 0.74		120,761	199,792
Central Bank of the Republic Uzbekistan and others	Off-shore short-term borrowings	0.16 ~ 9.40		3,594,780	1,273,928
China Development Bank and others	Off-shore long-term borrowings	2.34 ~ 3.36		1,523,818	1,007,560
Others	Short-term borrowings in foreign currencies	0.06 ~ 6.57		12,893,295	12,796,587
	Long-term borrowings in foreign currencies	0.10 ~ 5.41		554,817	934,287
			₩	<u>20,081,501</u>	<u>16,567,804</u>

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**20. Debentures**

Debentures as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Debentures in Korean won:				
Debentures	0.82	6.60	₩ 127,075,533	124,521,358
Discount on debentures			(337,875)	
Valuation adjustment for fair value hedges			(419,108)	
			<u>126,318,550</u>	
Debentures in foreign currencies:				
Debentures	0.05	10.87	20,939,433	21,100,328
Discount on debentures			(37,730)	
Premium on debentures			91	
Valuation adjustment for fair value hedges			(1,000,456)	
			<u>19,901,338</u>	
Off-shore debentures:				
Debentures	-	11.15	18,859,840	18,272,508
Discount on debentures			(48,784)	
Valuation adjustment for fair value hedges			(570,086)	
			<u>18,240,970</u>	
			<u>₩ 164,460,858</u>	<u>163,894,194</u>
<b>December 31, 2021</b>				
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Debentures in Korean won:				
Debentures	0.75	6.60	₩ 114,231,093	114,044,603
Discount on debentures			(78,927)	
Valuation adjustment for fair value hedges			(89,080)	
			<u>114,063,086</u>	
Debentures in foreign currencies:				
Debentures	-	10.87	19,519,310	20,665,552
Discount on debentures			(40,592)	
Premium on debentures			1,338	
Valuation adjustment for fair value hedges			143,824	
			<u>19,623,880</u>	
Off-shore debentures:				
Debentures	-	7.00	16,242,288	16,420,828
Discount on debentures			(28,401)	
Valuation adjustment for fair value hedges			114,066	
			<u>16,327,953</u>	
			<u>₩ 150,014,919</u>	<u>151,130,983</u>

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**21. Policy Reserves**

Details of policy reserves categorized by insurance type as of December 31, 2022 and 2021 are as follows:

	<b>Classification</b>	<b>December 31, 2022</b>	<b>December 31, 2021 (*)</b>
Premium reserve	Pure endowment ₩	5,265,159	5,395,804
	Death	7,370,175	6,916,124
	Endowment	4,300,952	4,274,623
	Group	25,964	22,451
		<u>16,962,250</u>	<u>16,609,002</u>
Unearned premium reserve	Pure endowment	1	1
	Death	9,981	9,923
	Group	<u>51</u>	<u>54</u>
Reserve for outstanding claims		10,033	9,978
	Pure endowment	111,101	99,736
	Death	248,218	258,962
	Endowment	632,726	626,189
	Group	<u>2,788</u>	<u>3,526</u>
Reserve for participating policyholders' dividends		994,833	988,413
	Pure endowment	37,899	40,304
	Death	2,653	2,859
	Endowment	1,724	1,782
	Group	<u>2</u>	<u>4</u>
Excess participating policyholders' dividend reserve		42,278	44,949
		3,267	3,503
Reserve for losses on participating insurance		2,905	6,934
Guaranteed benefit reserve		61,244	79,446
	₩	<u>18,076,810</u>	<u>17,742,225</u>

(\*) These are the policy reserves of KDB Life Insurance Co., Ltd. and are included in the liabilities held for sale.

**22. Defined Benefit Liabilities**

(1) Details of defined benefit liabilities as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Present value of defined benefit obligation ₩	428,545	440,643
Fair value of plan assets (*)	(517,369)	(431,562)
Net defined benefit liabilities	(88,824)	9,081
Liabilities for other long-term employment benefits	161	165
₩	<u>(88,663)</u>	<u>9,246</u>

(\*) The plan assets are in trusts with Kookmin Bank, Samsung Life Insurance Co., Ltd., etc.

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**22. Defined Benefit Liabilities, Continued**

(2) Changes in defined benefit liabilities for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
	Present value of defined benefit obligation	Fair value of plan assets	Net defined benefit liabilities	Liabilities for other long-term employment benefits
Beginning balance	₩ 440,643	(431,562)	9,081	165
Current service costs	47,583	-	47,583	-
Past service costs	34,363	-	34,363	-
Interest expense (income)	13,747	(13,758)	(11)	-
Remeasurements of defined benefit liabilities:				
Demographic assumption	9,167	-	9,167	-
Financial assumption	(97,924)	7,812	(90,112)	-
Return on plan assets	-	472	472	-
Experience adjustment	(1,991)	-	(1,991)	-
	(90,748)	8,284	(82,464)	-
Payments from the plan	(48,924)	32,971	(15,953)	-
Reclassification (*)	32,763	(33,535)	(772)	-
Contribution to the plan	-	(80,864)	(80,864)	-
Others	(882)	1,095	213	(4)
Ending balance	₩ 428,545	(517,369)	(88,824)	161

(\*) For the year ended December 31, 2022, the amount includes the reclassification from assets held for sale related to KDB Life Insurance Co., Ltd.

<b>2021</b>				
	Present value of defined benefit obligation	Fair value of plan assets	Net defined benefit liabilities	Liabilities for other long-term employment benefits
Beginning balance	₩ 909,847	(663,192)	246,655	4,839
Current service costs	46,832	-	46,832	-
Interest expense (income)	10,813	(9,741)	1,072	-
Remeasurements of defined benefit liabilities:				
Demographic assumption	15	-	15	-
Financial assumption	(45,986)	-	(45,986)	-
Return on plan assets	-	5,827	5,827	-
Experience adjustment	(10,674)	-	(10,674)	-
	(56,645)	5,827	(50,818)	-
Payments from the plan	(24,394)	22,371	(2,023)	-
Reclassification (*)	(446,551)	269,846	(176,705)	(4,697)
Contribution to the plan	-	(56,673)	(56,673)	-
Others	74	-	741	23
Ending balance	₩ 440,643	(431,562)	9,081	165

(\*) For the year ended December 31, 2021, the amount arising from the effect that defined benefit liabilities held by Daewoo Engineering & Construction Co., Ltd. are transferred to assets-held for sale is included.

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**22. Defined Benefit Liabilities, Continued**

(3) Fair value of plan assets for each type as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	Quoted market prices	Unquoted market prices	Quoted market prices	Unquoted market Prices
Equity securities	₩ 872	-	-	-
Debt securities	23,720	-	3,566	-
Due from banks	18,008	473,766	-	427,776
Others	1,003	-	220	-
	₩ 43,603	473,766	3,786	427,776

(4) Defined benefit costs recognized in profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Current service costs	₩ 47,583	44,020
Past service costs	34,363	-
Interest expense, net	(11)	683
	₩ 81,935	44,703

(5) The principal actuarial assumptions used as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Discount rate (%)	4.50 ~ 7.50	0.60 ~ 7.30
Future salary increasing rate (%)	2.00 ~ 5.50	2.00 ~ 5.69

(6) The present value sensitivity of defined benefit obligation as changes in principal actuarial assumptions as of December 31, 2022 is as follows:

	<b>Sensitivity</b>	
	1% increase in assumption	1% decrease in assumption
Discount rate	8.09% decrease	9.36% increase
Future salary increasing rate	9.25% increase	8.15% decrease

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**23. Provisions**

(1) Provisions as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Provision for payment guarantees	₩	457,215	215,388
Provision for unused commitments		139,433	182,468
Financial guarantee provision		42,650	56,238
Lawsuit provision		491	2,028
Provision for restoration		16,522	16,187
Other provision		33,518	173,020
	₩	<u>689,829</u>	<u>645,329</u>

(2) Changes in provision for payment guarantees for the years ended December 31, 2022 and 2021 are as follows:

2022					
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩	67,348	14,047	133,993	215,388
Transfer to 12-month expected credit loss		9,037	(191)	(8,846)	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(129,944)	131,290	(1,346)	-
Transfer to credit-impaired exposures		(164)	(2,667)	2,831	-
Provision for payment guarantees		53,620	111,457	17,933	183,010
Foreign currency translation		3,506	219,496	21,462	244,464
Others		-	(185,647)	-	(185,647)
Ending balance	₩	3,403	287,785	166,027	457,215

2021					
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩	79,221	98,719	94,878	272,818
Transfer to 12-month expected credit loss		105,507	(105,507)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(90,952)	90,952	-	-
Transfer to credit-impaired exposures		(4,090)	(1,552)	5,642	-
Provision for (reversal of) payment guarantees		(27,213)	(73,778)	23,228	(77,763)
Foreign currency translation		4,874	5,213	10,245	20,332
Others		1	-	-	1
Ending balance	₩	67,348	14,047	133,993	215,388

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**23. Provisions, Continued**

(3) Changes in provision for unused commitments for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩ 49,569	124,904	7,995	182,468
Transfer to 12-month expected credit loss	45,756	(45,756)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(18,733)	20,346	(1,613)	-
Transfer to credit-impaired exposures	(1,210)	(4,344)	5,554	-
Reversal of unused commitments	(59,474)	(2,015)	(2,821)	(64,310)
Foreign currency translation	16,600	4,335	194	21,129
Others	146	-	-	146
Ending balance	₩ 32,654	97,470	9,309	139,433

<b>2021</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩ 77,088	85,145	-	162,233
Transfer to 12-month expected credit loss	267,476	(267,476)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(34,669)	34,669	-	-
Transfer to credit-impaired exposures	(3,793)	(3,513)	7,306	-
Provision for (reversal of) unused commitments	(290,224)	275,637	601	(13,986)
Foreign currency translation	33,641	442	88	34,171
Others	50	-	-	50
Ending balance	₩ 49,569	124,904	7,995	182,468

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**23. Provisions, Continued**

(4) Changes of financial guarantee provision for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩ 2,723	15,321	38,194	56,238
Transfer to 12-month expected credit loss	-	-	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(282)	1,494	(1,212)	-
Transfer to credit-impaired exposures	(97)	(243)	340	-
Provision for (reversal of) financial guarantee	(1,681)	20,095	(32,002)	(13,588)
Ending balance	₩ 663	36,667	5,320	42,650

<b>2021</b>				
		Lifetime expected credit losses		
	12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩ 30,354	26,007	5,846	62,207
Transfer to 12-month expected credit loss	86	(14)	(72)	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(1,517)	1,522	(5)	-
Transfer to credit-impaired exposures	(9,226)	(94)	9,320	-
Provision for (reversal of) financial guarantee	(16,975)	(12,100)	23,105	(5,970)
Others	1	-	-	1
Ending balance	₩ 2,723	15,321	38,194	56,238

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**23. Provisions, Continued**

- (5) Changes of lawsuit provision, restoration provision and other provision for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>			
	<u>Lawsuit provision</u>	<u>Restoration provision</u>	<u>Other provision</u>
Beginning balance	₩ 2,028	16,187	173,020
Reversal of provision	(1,550)	(2,007)	(44,111)
Provision used	-	(693)	(25)
Foreign exchange differences	(20)	2	8
Reclassification (*)	-	1,415	(91,317)
Others	33	1,618	(4,057)
Ending balance	₩ 491	16,522	33,518

- (\*) For the year ended December 31, 2022, the amount includes the reclassification from liabilities held for sale to securities measured at FVOCI related to KDB Life Insurance Co., Ltd.

<b>2021</b>			
	<u>Lawsuit provision</u>	<u>Restoration provision</u>	<u>Other provision</u>
Beginning balance	₩ 26,949	15,717	426,782
Increase (reversal) of provision	1,611	(1,820)	115,432
Provision used	-	(849)	(142)
Reclassification (*)	(26,374)	-	(366,001)
Others	(158)	3,139	(3,051)
Ending balance	₩ 2,028	16,187	173,020

- (\*) For the year ended December 31, 2021, the amount arising from the effect that lawsuit provision and other provision held by Daewoo Engineering & Construction Co., Ltd. are transferred to assets-held for sale is included.

(6) Provision for payment guarantees and financial guarantee

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off-statement of financial position items in the notes to the financial statements. The Group provides a provision for such off-statement of financial position items, applying a Credit Conversion Factor ('CCF') and provision rates under the Group's expected credit loss model, and records the provision as a reserve for expected credit losses on acceptances and guarantees.

In the case of financial guarantee contracts, when the amount calculated using the same method as above is greater than the initial amount less amortization of fees recognized, the difference is recorded as provision for financial guarantee.

(7) Provision for unused commitments

The Group records a provision for a certain portion of unused credit lines which is calculated using a CCF as provision for unused commitments applying provision rates under the Group's expected credit loss model.

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**23. Provisions, Continued**

(8) Provision for possible losses from lawsuits

As of December 31, 2022, the Group is involved in 75 lawsuits as a plaintiff and 137 lawsuits as a defendant. The aggregate amounts of claims as a plaintiff and a defendant amounted to ₩679,876 million and ₩562,114 million, respectively. The Group provided a provision against contingent loss from pending lawsuits as of December 31, 2022 and additional losses may be incurred depending on the final result of pending lawsuits.

Some investors who bought the DSME's shares, corporate bonds and commercial papers sued the DSME, certain accounting firm and others for damage claims asserting that they had misled by false audit report, business report, registration of securities, prospectus, etc. and these lawsuits are included in the Group's lawsuits as a defendant.

Major lawsuits in progress as of December 31, 2022 and 2021 are as follows:

		December 31, 2022		
		Contents	Amounts	Status of lawsuit
Plaintiff:				
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩	136,538	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled against the Group; 3 <sup>rd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Transfer of claim		8,792	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled partially in favor of the Group; 3 <sup>rd</sup> trial in progress
Hana Bank and 6 others	Claim for undue benefit		1,647	1 <sup>st</sup> trial ruled against the Group; 2 <sup>nd</sup> trial in progress
e-RAP KOREA Co., Ltd. and one other	Claim for loans (participate in succession)		1,238	1 <sup>st</sup> trial in progress
Defendant:				
Shinhan Bank and one other	Claim for damages		58,474	1 <sup>st</sup> trial in progress
169 individuals including Mr. Kim	Claim for wage		36,573	1 <sup>st</sup> trial ruled in favor of the Group; 2 <sup>nd</sup> trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor		33,997	1 <sup>st</sup> trial ruled in favor of the Group; 2 <sup>nd</sup> trial ruled against the Group; 3 <sup>rd</sup> trial in progress
Woori Bank	Claim for profit and loss settlement		21,246	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled against the Group
Dongbu Corporation	Claim for objection of request (participation to support)		19,658	1 <sup>st</sup> trial in progress
Export-Import Bank of Korea	Claim for undue benefit, etc.		9,797	1 <sup>st</sup> trial ruled in favor of the Group; 2 <sup>nd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Claim for transaction amount (counterclaim)		7,000	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled partially in favor of the Group; 3 <sup>rd</sup> trial in progress

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**23. Provisions, Continued**

	<b>December 31, 2021</b>		
	Contents	Amounts	Status of lawsuit
Plaintiff:			
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩ 136,538	1 <sup>st</sup> trial ruled against the Group; 2 <sup>nd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Transfer of claim	8,792	1 <sup>st</sup> trial ruled partially in favor of the Group; 2 <sup>nd</sup> trial in progress
Hana Bank and 6 others	Claim for undue benefit	1,647	1 <sup>st</sup> trial in progress
Kappa Korea and one other	Claim for loans	1,000	1 <sup>st</sup> trial in progress
Plaza Rakyat	Claim for construction cost due to termination of contractor contract	264,198	1 <sup>st</sup> trial in progress
AOA	Claim for construction cost	63,809	1 <sup>st</sup> trial in progress
Defendant:			
Shinhan Bank and one other	Claim for damages	58,474	1 <sup>st</sup> trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor	33,997	1 <sup>st</sup> trial ruled in favor of the Group; 2 <sup>nd</sup> trial ruled against the Group; 3 <sup>rd</sup> trial in progress
Dongbu Corporation	Claim for objection of request (participation to support)	19,658	1 <sup>st</sup> trial in progress
Hana Bank	Claim for settlement money and others	7,500	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled in favor of the Group; 3 <sup>rd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Claim for transaction amount	7,000	1 <sup>st</sup> trial ruled partially in favor of the Group

(9) Other provision

The Group recognized other provision as a reserve for other miscellaneous purpose.

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**24. Other Liabilities**

Other liabilities as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Accounts payable	₩	2,798,627	3,447,940
Lease liabilities		221,508	178,997
Accrued expense		2,123,959	1,609,113
Domestic exchange payable		243,620	617,446
Borrowing from trust accounts		714,648	1,009,233
Advance receipts		41,813	317,268
Guarantee money received		1,293,342	577,055
Trade payable		8,926	80,771
Unearned income		457,422	69,166
Deposits withholding tax		49,822	27,749
Foreign exchanges payable		30,231	58,241
Financial guarantee liability		28,874	23,093
Others		903,055	96,879
		8,915,847	8,112,951
Present value discount		(142,485)	(75,686)
	₩	8,773,362	8,037,265

The carrying amount of financial liabilities included in other liabilities above amounted to ₩7,381,131 million and ₩7,564,991 million as of December 31, 2022 and 2021, respectively, and their fair value amounted to ₩7,450,812 million and ₩7,636,399 million as of December 31, 2022 and 2021, respectively.

(2) Details of lease liabilities as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>		
		Face value	Discount	Carrying amounts
Real estate	₩	208,135	(97,511)	110,624
Vehicles		12,502	(1,037)	11,465
Others		871	(82)	789
	₩	221,508	(98,630)	122,878

		<b>December 31, 2021</b>		
		Face value	Discount	Carrying amounts
Real estate	₩	169,781	(51,278)	118,503
Vehicles		7,769	(793)	6,976
Others		1,447	(148)	1,299
	₩	178,997	(52,219)	126,778

Cash payments for the principal portion of the lease liabilities are ₩42,614 and ₩38,232 million for the years ended December 31, 2022 and 2021, respectively and cash payments for the interest portion of the lease liabilities are ₩2,365 and ₩797 million for the years ended December 31, 2022 and 2021, respectively.

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**25. Equity**

(1) Issued capital

The Group is authorized to issue up to 6,000 million shares of common stock and has 4,630,311,768 shares and 4,377,311,768 shares issued as of December 31, 2022 and 2021, respectively, and outstanding with a total par value (₩ 5,000 of par value per share) of ₩23,151,559 million ₩21,886,559 million as of December 31, 2022 and 2021, respectively. Due to the Group's paid-capital increase, total number and par value of the shares increased in 2022.

(2) Capital surplus

Capital surplus as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Paid-in capital in excess of par value	₩	40,442	44,142
Surplus from capital reduction		47,973	47,973
Share of capital surplus of associates		122,810	122,810
Other capital surplus		700,363	543,635
	₩	<u>911,588</u>	<u>758,560</u>

(3) Capital adjustments

Capital adjustments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Share of capital adjustment of associates	₩	220,936	220,936
Other capital adjustment		53,521	57,456
	₩	<u>274,457</u>	<u>278,392</u>

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**25. Equity, Continued**

(4) Accumulated other comprehensive income

(i) Accumulated other comprehensive income as of December 31, 2022 and 2021 are as follows:

	December 31, 2022	December 31, 2021
Net gain on securities measured at FVOCI:		
Valuation gain on securities measured at FVOCI (before tax)	₩ 1,885,098	6,074,595
Loss allowance for securities measured at FVOCI (before tax)	87,097	87,348
Income tax effect	(524,264)	(1,694,708)
	1,447,931	4,467,235
Share of other comprehensive income of associates:		
Share of other comprehensive income of associates (before tax)	1,416,661	756,192
Income tax effect	(4,831)	6,477
	1,411,830	762,669
Exchange differences on translation of foreign operations:		
Exchange differences on translation of foreign operations (before tax)	24,615	(371,866)
Income tax effect	(3,763)	123,419
	20,852	(248,447)
Valuation loss on cash flow hedge:		
Valuation loss on cash flow hedge (before tax)	12,960	(1,154)
Income tax effect	(3,352)	418
	9,608	(736)
Net gain (loss) on hedges of net investments in foreign operations :		
Net gain (loss) on hedges of net investments in foreign operations (before tax)	(96,873)	(29,121)
Income tax effect	25,671	8,008
	(71,202)	(21,113)
Remeasurements of defined benefit liabilities:		
Remeasurements of defined benefit liabilities (before tax)	130,749	23,774
Income tax effect	(35,161)	(8,573)
	95,588	15,201
Fair value changes on financial liabilities designated at fair value due to credit risk:		
Valuation gain (loss) on financial liabilities designated at fair value due to credit risk (before tax)	123,396	657
Income tax effect	(32,699)	(180)
	90,697	477
Others:		
Others (before tax)	881	881
Income tax effect	1,500	1,503
	2,381	2,384
₩	3,007,685	4,977,670

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**25. Equity, Continued**

(ii) Changes in accumulated other comprehensive income for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
	January 1, 2022	Increase (Decrease)	Tax Effect	December 31, 2022
Net gain (loss) on securities measured at FVOCI	₩ 4,467,235	(4,189,748)	1,170,444	1,447,931
Share of other comprehensive income of associates	762,669	660,469	(11,308)	1,411,830
Exchange differences on translation of foreign operations	(248,447)	396,481	(127,182)	20,852
Valuation gain (loss) on cash flow hedge	(736)	14,114	(3,770)	9,608
Net gain (loss) on hedges of net investments in foreign operations	(21,113)	(67,752)	17,663	(71,202)
Remeasurements of defined benefit liabilities	15,201	106,975	(26,588)	95,588
Fair value changes on financial liabilities designated at fair value due to credit risk	477	122,739	(32,519)	90,697
Others	2,384	-	(3)	2,381
	<u>₩ 4,977,670</u>	<u>(2,956,722)</u>	<u>986,737</u>	<u>3,007,685</u>
<b>2021</b>				
	January 1, 2021	Increase (Decrease)	Tax Effect	December 31, 2021
Net gain (loss) on securities measured at FVOCI	₩ 2,046,202	3,346,657	(925,624)	4,467,235
Share of other comprehensive income of associates	442,810	322,307	(2,448)	762,669
Exchange differences on translation of foreign operations	(447,601)	206,761	(7,607)	(248,447)
Valuation gain (loss) on cash flow hedge	(1,006)	372	(102)	(736)
Net gain (loss) on hedges of net investments in foreign operations	35,507	(78,096)	21,476	(21,113)
Remeasurements of defined benefit liabilities	(18,968)	49,006	(14,837)	15,201
Fair value changes on financial liabilities designated at fair value due to credit risk	(5,769)	8,615	(2,369)	477
Others	2,336	-	48	2,384
	<u>₩ 2,053,511</u>	<u>3,855,622</u>	<u>(931,463)</u>	<u>4,977,670</u>

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**25. Equity, Continued**

(5) Retained earnings

In accordance with the *Korea Development Bank Act*, the Group is required to appropriate at least 40% of net income as a legal reserve. This reserve can be transferred to paid-in capital or offset an accumulated deficit.

In accordance with the *Korea Development Bank Act*, the Group offsets an accumulated deficit with reserves. If the reserve is insufficient to offset the accumulated deficit, the Korean government is responsible for the deficit.

(i) Retained earnings as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Legal reserve	₩ 2,535,892	1,551,154
Voluntary reserve		
Regulatory reserve for credit losses (*)	247,252	482,885
Unappropriated retained earnings	3,769,216	12,056,067
	₩ 6,552,360	14,090,106

(\*) This amount is regulatory reserve for credit losses recognized by the Bank, controlling company, in the separate financial statements according to the Article 29(1) and (2) of the *Regulation on Supervision of Banking Business*.

(ii) Changes in legal reserve for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 1,551,154	1,356,142
Transfer from retained earnings	984,738	195,012
Ending balance	₩ 2,535,892	1,551,154

(iii) Changes in unappropriated retained earnings for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 12,056,067	9,844,908
Changes in accounting policy	(853)	(31,821)
Profit (loss) attributable to owners of the parent for the year	(6,900,726)	1,926,033
Contribution to legal reserve	(984,738)	(195,012)
Dividends	(833,089)	(209,638)
Reclassification of valuation gain or loss on equity securities measured at FVOCI	193,307	54,172
Transfer from regulatory reserve for credit losses	229,939	672,712
Others	9,309	(5,287)
Ending balance	₩ 3,769,216	12,056,067

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**25. Equity, Continued**

(6) Regulatory reserve for credit losses

The Group is required to provide regulatory reserve for credit losses in accordance with *Regulation on Supervision of Banking Business 29(1) and (2)*. The details of regulatory reserve for credit losses are as follows:

(i) Regulatory reserve for credit losses as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Beginning balance	₩	272,805	502,744
Planned reversal of regulatory reserve for credit losses		(18,231)	(229,939)
Ending balance	₩	<u>254,574</u>	<u>272,805</u>

(ii) Obligated amount of provision for regulatory reserve for loan losses and profit after adjusting regulatory reserve for loan losses for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Profit (loss) for the year	₩	(7,624,583)	1,323,469
Obligated amount of reversal of regulatory reserve for loan losses		18,231	229,939
Profit (loss) after adjusting regulatory reserve for loan losses	₩	<u>(7,606,352)</u>	<u>1,553,408</u>
Earnings (loss) per share after adjusting regulatory reserve for loan losses (in won)	₩	<u>(1,699)</u>	<u>360</u>

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**26. Net Interest Income**

Net interest income for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Interest income:		
Due from banks ₩	141,000	81,574
Securities measured at FVTPL	227,345	203,792
Securities measured at FVOCI	830,109	532,560
Securities measured at amortized cost	215,377	163,381
Loans measured at FVTPL	12,471	17,111
Loans measured at amortized cost	6,702,345	4,143,838
	<u>8,128,647</u>	<u>5,142,256</u>
Interest expense:		
Financial liabilities measured at FVTPL	(82,977)	(82,058)
Deposits	(1,166,779)	(369,945)
Borrowings	(671,261)	(206,935)
Debentures	(3,448,057)	(1,992,765)
	<u>(5,369,074)</u>	<u>(2,651,703)</u>
₩	<u><u>2,759,573</u></u>	<u><u>2,490,553</u></u>

**27. Net Fees and Commission Income**

Net fees and commission income for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Fees and commission income:		
Loan commissions ₩	131,168	111,351
Underwriting and investment consulting commissions	131,200	118,749
Brokerage and agency commissions	7,953	7,317
Trust and retirement pension plan commissions	34,240	34,561
Fees on asset management	7,614	12,440
Other fees	351,506	160,926
	<u>663,681</u>	<u>445,344</u>
Fees and commission expenses:		
Brokerage and agency fees	(11,021)	(9,667)
Other fees	(69,351)	(15,108)
	<u>(80,372)</u>	<u>(24,775)</u>
₩	<u><u>583,309</u></u>	<u><u>420,569</u></u>

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**28. Dividend Income**

Dividend income for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Securities measured at FVTPL	₩	295,828	191,091
Securities measured at FVOCI		183,985	129,421
	₩	<u>479,813</u>	<u>320,512</u>

**29. Net Gain (loss) on Securities Measured at FVTPL**

Net gain (loss) related to securities measured at FVTPL for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Gains on securities measured at FVTPL:			
Gains on redemption	₩	10,119	4,787
Gains on sale		278,000	230,174
Gains on valuation		668,577	480,329
		<u>956,696</u>	<u>715,290</u>
Losses on securities measured at FVTPL:			
Losses on redemption		(703)	(30,647)
Losses on sale		(313,438)	(122,549)
Losses on valuation		(723,877)	(350,584)
Purchase related expense		(325)	(172)
		<u>(1,038,343)</u>	<u>(503,952)</u>
	₩	<u>(81,647)</u>	<u>211,338</u>

**30. Net Gain on Financial Liabilities Measured at FVTPL**

Net gain related to financial liabilities measured at FVTPL for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Gains on financial liabilities measured at FVTPL:			
Gains on redemption	₩	5,438	625
Gains on sale		-	322
Gains on valuation		459,661	152,245
		<u>465,099</u>	<u>153,192</u>
Losses on financial liabilities measured at FVTPL:			
Losses on redemption		-	(310)
Losses on sale		-	(285)
Losses on valuation		-	(2,679)
		<u>-</u>	<u>(3,274)</u>
	₩	<u>465,099</u>	<u>149,918</u>

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**31. Net Loss on Securities Measured at FVOCI**

Net loss related to securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Gains on securities measured at FVOCI:		
Gains on redemption	₩ 149	-
Gains on sale	11,448	16,605
Reversal of impairment losses	5,228	-
	<u>16,825</u>	<u>16,605</u>
Losses on securities measured at FVOCI:		
Losses on redemption	(701)	(387)
Losses on sale	(86,662)	(38,592)
Impairment losses	(2,290)	(7,596)
	<u>(89,653)</u>	<u>(46,575)</u>
	<u>₩ (72,828)</u>	<u>(29,970)</u>

**32. Net Gain (Loss) on Securities Measured at Amortized Cost**

Net gain (loss) related to securities measured at amortized cost for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Gains on securities measured at amortized cost:		
Gains on redemption	₩ -	2,769
Gains on sale	363	-
Reversal of impairment losses	2,575	3
	<u>2,938</u>	<u>2,772</u>
Losses on securities measured at amortized cost:		
Impairment losses	(51)	(4,788)
	<u>(51)</u>	<u>(4,788)</u>
	<u>₩ 2,887</u>	<u>(2,016)</u>

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**33. Net Loss on Derivatives**

Net loss on derivatives for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Net gain on trading purpose derivatives:		
Gains on trading purpose derivatives:		
Interest rate ₩	5,177,045	2,490,212
Currency	16,380,385	10,941,400
Stock	9,773	17,952
Gains on adjustment of derivatives	<u>32,404</u>	<u>77,038</u>
	21,599,607	13,526,602
Losses on trading purpose derivatives:		
Interest rate	(4,539,760)	(2,369,340)
Currency	(16,244,977)	(10,906,238)
Stock	(32,930)	(21,083)
Losses on adjustment of derivatives	<u>(49,306)</u>	<u>(92,246)</u>
	<u>(20,866,973)</u>	<u>(13,388,907)</u>
	732,634	137,695
Net loss on hedging purpose derivatives:		
Gains on hedging purpose derivatives:		
Interest rate	356,634	78,163
Currency	793,297	171,951
Gains on adjustment of derivatives	<u>309</u>	<u>782</u>
	1,150,240	250,896
Losses on hedging purpose derivatives:		
Interest rate	(1,977,057)	(713,067)
Currency	(1,923,104)	(877,685)
Losses on adjustment of derivatives	<u>(501)</u>	<u>(422)</u>
	<u>(3,900,662)</u>	<u>(1,591,174)</u>
	(2,750,422)	(1,340,278)
Net gain on fair value hedged items:		
Gains on fair value hedged items:		
Gains on valuation	2,264,372	773,826
Gains on redemption	<u>101,261</u>	<u>184,599</u>
	2,365,633	958,425
Losses on fair value hedged items:		
Losses on valuation	(475,082)	(271,319)
Losses on redemption	<u>(396,415)</u>	<u>(205,224)</u>
	<u>(871,497)</u>	<u>(476,543)</u>
	1,494,136	481,882
₩	<u><u>(523,652)</u></u>	<u><u>(720,701)</u></u>

Related with cash flow hedge, the Group recognized ₩111 million of gain and ₩152 million of gain in the consolidated statement of comprehensive income as the ineffective portion for the years ended December 31, 2022 and 2021, respectively.

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**34. Net Foreign Currency Transaction Gain (Loss)**

Net foreign currency transaction gain (loss) for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Net gain on foreign exchange transactions:		
Gains on foreign exchange transactions ₩	1,097,278	610,256
Losses on foreign exchange transactions	<u>(1,083,446)</u>	<u>(605,355)</u>
	13,832	4,901
Net gain (loss) on foreign exchange translations:		
Gains on foreign exchange translations	14,353,681	9,004,655
Losses on foreign exchange translations	<u>(14,484,977)</u>	<u>(8,694,941)</u>
	<u>(131,296)</u>	<u>309,714</u>
₩	<u><u>(117,464)</u></u>	<u><u>314,615</u></u>

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**35. Other Operating Income, net**

Other operating income and expense for the years ended December 31, 2022 and 2021 are as follows:

	2022	2021
Other operating income:		
Insurance income	₩ 2,746,585	2,439,089
Gains on sale of investments in associates	59,350	37,414
Gains on sale of loans	41,477	64,484
Gains on disposal of loans measured at FVTPL	8,100	1,860,411
Gains on valuation of loans measured at FVTPL	9,364	83,772
Gains on demand equity redemption	15,328	73,863
Reversal of provisions	47,880	3,781
Gains on bargain purchase	2,518	96
Gains on redemption of debentures	4	1
Others	235,086	224,531
	3,165,692	4,787,442
Other operating expense:		
Insurance losses	(3,374,613)	(3,001,476)
Losses on sale of investments in associates	(129,980)	(325,424)
Losses on sale of loans	(9,164)	(28,332)
Losses on disposal of loans measured at FVTPL	(8,709)	(9,692)
Losses on valuation of loans measured at FVTPL	(88,248)	(4,349)
Losses on demand equity redemption	(280,910)	(126,371)
Increase of provisions	(212)	(10,078)
Losses on redemption of debentures	-	(1)
Others	(477,959)	(385,382)
	(4,369,795)	(3,891,105)
₩	(1,204,103)	896,337

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**36. Provision for Credit Losses**

Provision for credit losses for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Provision for loss allowance	₩ 522,344	621,071
Provision for other manufacturing-related assets	-	13
Reversal of other assets	(687,406)	(33,295)
Reversal of due from banks	(76)	-
Reversal of unused commitments	(64,310)	(13,986)
Reversal of financial guarantees	(13,588)	(5,970)
Provision for (reversal of) payment guarantees	183,010	(77,763)
	₩ (60,026)	490,070

**37. General and Administrative Expenses**

General and administrative expenses for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Payroll costs:		
Short-term employee benefits	₩ 473,921	458,291
Defined benefit costs	73,368	43,282
Defined contribution costs	10,041	9,021
	557,330	510,594
Depreciation and amortization:		
Depreciation of property and equipment	84,049	82,553
Amortization of intangible assets	59,053	58,070
	143,102	140,623
Other:		
Employee welfare benefits	48,867	43,323
Rent expenses	6,762	6,674
Taxes and dues	50,784	37,460
Advertising expenses	18,516	17,923
Others	191,467	183,352
	316,396	288,732
	₩ 1,016,828	939,949

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**38. Other Non-Operating Income and Expense**

Other non-operating income and expense for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Other non-operating income:		
Interest income of non-financial business	₩ 243	38
Gain on assets held for sale	-	3,637
Gain on disposal of property and equipment	2,682	2,129
Rental income on investment property	7,631	6,725
Gain on disposal of intangible assets	768	1,874
Others	9,831	7,546
	<u>21,155</u>	<u>21,949</u>
Other non-operating expense:		
Interest expense of non-financial business	(30)	(4,635)
Loss on assets held for sale	-	(2)
Loss on disposal of property and equipment	(1,453)	(771)
Impairment loss of property and equipment	(1,495)	(2,161)
Depreciation of investment property	(4,382)	(4,424)
Loss on disposal of intangible assets	(78)	(20)
Impairment loss of intangible assets	(103)	-
Donations	(5,825)	(6,750)
Others	(19,892)	(30,091)
	<u>(33,258)</u>	<u>(48,854)</u>
₩	<u>(12,103)</u>	<u>(26,905)</u>

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**39. Income Tax Expenses (Benefits)**

(1) Income tax expenses (benefits) for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Current income tax	₩	333,590	(332,396)
Changes in income tax before the prior years		(149,746)	(350,718)
Changes in deferred income taxes on temporary differences		(3,177,558)	2,882,412
Income tax recognized directly to equity:			
Other comprehensive income (owners of the parent)		986,737	(931,463)
Other comprehensive income (non-controlling interests)		(37,185)	(1,746)
Retained earnings (including non-controlling interests)		(74,695)	(20,547)
Income tax expenses (benefits):	₩	<u>(2,118,857)</u>	<u>1,245,542</u>
Continuing operations		(2,050,174)	985,444
Discontinued operations		(68,683)	260,098

(2) Profit (loss) before income taxes and income tax expenses (benefits) for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Profit (loss) before income taxes	₩	(8,604,334)	3,348,039
Income taxes calculated using enacted tax rates		418,329	920,711
Adjustments:			
Non-deductible losses and tax-free gains		(26,659)	(52,087)
Non-recognition effect of deferred income taxes		110,532	257,652
Net adjustments for prior years		(42,515)	(33,707)
Consolidation adjustments		(2,410,945)	(342,775)
Others		(98,916)	235,650
		<u>(2,468,503)</u>	<u>64,733</u>
Income tax expenses (benefits)	₩	<u>(2,050,174)</u>	<u>985,444</u>
Effective tax rate		23.83%	29.43%

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**39. Income Tax Expenses (Benefits), Continued**

(3) Changes in deferred income taxes recognized directly to equity for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>					
	December 31, 2022		January 1, 2022		Changes in tax effect	
	Amounts before tax	Tax effect	Amounts before tax	Tax effect		
Net gain (loss) on securities measured at FVOCI	₩ 1,972,195	(524,264)	6,161,943	(1,694,708)	1,170,444	
Share of other comprehensive income (loss) of associates	1,416,661	(4,831)	756,192	6,477	(11,308)	
Exchange differences on translation of foreign operations	24,615	(3,763)	(371,866)	123,419	(127,182)	
Gain (loss) on valuation of cash flow hedge	12,960	(3,352)	(1,154)	418	(3,770)	
Net gain (loss) on hedges of net investments in foreign operations	(96,873)	25,671	(29,121)	8,008	17,663	
Remeasurements of defined benefit liabilities	130,749	(35,161)	23,774	(8,573)	(26,588)	
Fair value changes on financial liabilities designated at fair value due to credit risk	123,396	(32,699)	657	(180)	(32,519)	
Others	881	1,500	881	1,503	(3)	
	₩ 3,584,584	(576,899)	6,541,306	(1,563,636)	986,737	

₩74,695 million of income tax benefits which is directly recognized in retained earnings consist of tax effects from ₩271,617 million of realized gain on disposal of equity securities measured at FVOCI.

	<b>2021</b>					
	December 31, 2021		January 1, 2021		Changes in tax effect	
	Amounts before tax	Tax effect	Amounts before tax	Tax effect		
Net gain (loss) on securities measured at FVOCI	₩ 6,161,943	(1,694,708)	2,815,286	(769,084)	(925,624)	
Share of other comprehensive income (loss) of associates	756,192	6,477	433,885	8,925	(2,448)	
Exchange differences on translation of foreign operations	(371,866)	123,419	(578,627)	131,026	(7,607)	
Gain (loss) on valuation of cash flow hedge	(1,154)	418	(1,526)	520	(102)	
Net gain (loss) on hedges of net investments in foreign operations	(29,121)	8,008	48,975	(13,468)	21,476	
Remeasurements of defined benefit liabilities	23,774	(8,573)	(25,232)	6,264	(14,837)	
Fair value changes on financial liabilities designated at fair value due to credit risk	657	(180)	(7,958)	2,189	(2,369)	
Others	881	1,503	881	1,455	48	
	₩ 6,541,306	(1,563,636)	2,685,684	(632,173)	(931,463)	

(\*) The effect of changes in accounting policy is included.

₩20,547 million of income tax benefits which is directly recognized in retained earnings consist of tax effects from ₩74,270 million of realized gain on disposal of equity securities measured at FVOCI.

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**39. Income Tax Expenses (Benefits), Continued**

(4) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021 are as follows:

		2022			
		January 1, 2022	Increase/ decrease	December 31, 2022	Deferred tax assets (liabilities) (*)
Temporary differences from recognized deferred tax assets and liabilities:					
Derivatives	₩	(479,047)	1,679,813	1,200,766	318,136
Investments in associates		(9,481,569)	1,398,751	(8,082,818)	(2,875,881)
Securities measured at FVOCI		(147,306)	41	(147,265)	(31)
Impairment losses on debt securities		65,933	-	65,933	17,472
Impairment losses on equity securities		114,603	(38,879)	75,724	17,961
Others		(11,127,315)	7,948,202	(3,179,113)	(952,457)
		(21,054,702)	10,987,928	(10,066,774)	(3,474,800)
Temporary differences from unrecognized deferred tax assets and liabilities:					
Investments in associates		2,512,727	299,860	2,812,587	-
	₩	(23,567,429)	10,688,068	(12,879,361)	(3,474,800)
Undisposed accumulated deficit by deferred corporate taxes:					
Undisposed accumulated deficit	₩	-	591,011	591,011	156,619

(\*) The deferred tax assets (liabilities) classified as assets (liabilities) held for sale are not included.

(\*) The deferred tax assets (liabilities) classified as assets (liabilities) held for sale are not included.

		2021			
		January 1, 2021	Increase/ decrease	December 31, 2021	Deferred tax assets (liabilities) (*)
Temporary differences from recognized deferred tax assets and liabilities:					
Derivatives	₩	(1,481,550)	1,002,503	(479,047)	(133,262)
Investments in associates		(6,944,717)	(2,536,853)	(9,481,570)	(3,248,670)
Securities measured at FVOCI		(146,517)	(789)	(147,306)	185
Impairment losses on debt securities		65,933	-	65,933	18,132
Impairment losses on equity securities		137,937	(23,334)	114,603	14,666
Others		(3,135,977)	(7,991,338)	(11,127,315)	(3,146,790)
		(11,504,891)	(9,549,811)	(21,054,702)	(6,495,739)
Temporary differences from unrecognized deferred tax assets and liabilities:					
Investments in associates		1,886,720	626,007	2,512,727	-
	₩	(13,391,611)	(10,175,818)	(23,567,429)	(6,495,739)
Undisposed accumulated deficit by deferred corporate taxes:					
Undisposed accumulated deficit	₩	562,673	(562,673)	-	-
(*) The deferred tax assets (liabilities) classified as assets (liabilities) held for sale are not included.					

(\*) The deferred tax assets (liabilities) classified as assets (liabilities) held for sale are not included.

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**39. Income Tax Expenses (Benefits), Continued**

- (5) Deferred income tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current income tax liabilities and assets, and they relate to income tax levied by the same tax authority and they intend to settle current income tax liabilities and assets on a net basis.

**40. Earnings (loss) per Share**

- (1) Basic earnings (loss) per share

The Group's basic earnings per share for the years ended December 31, 2022 and 2021 are computed as follows:

- (i) Basic earnings (loss) per share

		2022	2021
Profit (loss) for the year (in won)	₩	(7,624,583,303,425)	1,323,468,650,568
Loss attributable to non-controlling interests (in won)		(723,857,053,498)	(602,564,683,893)
Profit (loss) attributable to ordinary shareholders of the Group (A) (in won)		(6,900,726,249,927)	1,926,033,334,461
Profit (loss) from continuing operations (in won)		(6,598,981,564,656)	2,209,391,514,016
Loss from discontinued operations (in won)		(301,744,685,271)	(283,358,179,555)
Weighted-average number of ordinary shares outstanding (B)		4,477,598,343	4,319,226,656
Basic earnings (loss) per share (A/B) (in won)	₩	(1,541)	446
Basic earnings (loss) per share - continuing operations (in won)		(1,474)	512
Basic loss per share -discontinued operations (in won)		(67)	(66)

- (ii) Weighted-average number of ordinary shares outstanding

	2022		
	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	4,377,311,768	365	1,597,718,795,320
Increased paid-in capital (B)	78,400,000	318	24,931,200,000
Increased paid-in capital (C)	61,600,000	184	11,334,400,000
Increased paid-in capital (D)	113,000,000	3	339,000,000
Cumulative shares (E = A+B+C+D)			1,634,323,395,320
Weighted-average number of ordinary shares outstanding (E/365)			4,477,598,343

	2021		
	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	4,153,145,768	365	1,515,898,205,320
Increased paid-in capital (B)	102,000,000	338	34,476,000,000
Increased paid-in capital (C)	122,166,000	214	26,143,524,000
Cumulative shares (D = A+B+C)			1,576,517,729,320
Weighted-average number of ordinary shares outstanding (D/365)			4,319,226,656

- (2) Diluted earnings per share

Diluted and basic earnings per share for the years ended December 31, 2022 and 2021 are equal because there is no potential dilutive instrument.

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**41. Pledged Assets**

Assets pledged by the Group as collateral as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>		<b>December 31, 2021</b>	
		Pledged assets	Related liabilities	Pledged assets	Related liabilities
Cash and due from banks (*1)	₩	6,363	-	-	-
Securities (*2)		7,338,978	432,969	6,838,083	1,685,428
Others (*3)		269,500	186,883	5,905,571	7,374,187
	₩	<u>7,614,841</u>	<u>619,852</u>	<u>12,743,654</u>	<u>9,059,615</u>

(\*1) Pledged as collateral for bidding deposits and others.

(\*2) Pledged as collateral for bonds sold under repurchase agreements, BOK loans and back overdrafts.

(\*3) Property and equipment, etc. are pledged as collateral for borrowings and new business.

**42. Guarantees and Commitments**

Guarantees and commitments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Confirmed acceptances and guarantees:			
Acceptances in foreign currency	₩	224,255	281,354
Guarantees for bond issuance		1,860,754	2,224,142
Guarantees for loans		560,129	570,588
Letter of guarantee		64,924	37,262
Guarantees for on-lending debt		4,877	6,794
Others		3,661,506	3,862,877
		<u>6,376,445</u>	<u>6,983,017</u>
Unconfirmed acceptances and guarantees:			
Letter of credit		1,875,325	1,851,986
Others		3,169,784	2,380,519
		<u>5,045,109</u>	<u>4,232,505</u>
Commitments:			
Commitments on loans		44,947,184	42,266,415
Commitments on purchase of securities		3,155,025	2,533,599
		<u>48,102,209</u>	<u>44,800,014</u>
	₩	<u>59,523,763</u>	<u>56,015,536</u>

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**43. Leases**

(1) Finance lease

Details of finance lease receivables of the Group as lessor as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
	Finance lease receivables in Korean won	Finance lease receivables in foreign currency	Total
Within 1 year	₩ 458,931	114,167	573,098
Over 1 year through 5 years	1,409,842	159,619	1,569,461
Over 5 years	3,029	-	3,029
Gross investment in the lease	1,871,802	273,786	2,145,588
Unearned finance income	(223,862)	(33,705)	(257,567)
Net investment in the lease (*)	₩ 1,647,940	240,081	1,888,021
Contingent rent recognized in the current profit or loss	₩ -	-	-

(\*) Finance lease receivables are included in loans measured at amortized cost on the consolidated statements of financial position.

<b>December 31, 2021</b>			
	Finance lease receivables in Korean won	Finance lease receivables in foreign currency	Total
Within 1 year	₩ 429,398	90,723	520,121
Over 1 year through 5 years	1,201,426	117,115	1,318,541
Over 5 years	1,357	-	1,357
Gross investment in the lease	1,632,181	207,838	1,840,019
Unearned finance income	(170,240)	(20,847)	(191,087)
Net investment in the lease (*)	₩ 1,461,941	186,991	1,648,932
Contingent rent recognized in the current profit or loss	₩ (383)	-	(383)

(\*) Finance lease receivables are included in loans measured at amortized cost on the consolidated statements of financial position.

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**43. Leases, Continued**

(2) Operating lease

Future minimum lease receivables under non-cancellable operating leases as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Within 1 year	₩ 3,361	2,911
Over 1 year through 5 years	4,800	4,208
	₩ 8,161	7,119
Contingent rent recognized in the current loss	₩ -	-

(3) Cancellable lease

Cancellable lease as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Cancellable financial lease	₩ 4,563	4,414
Allowance for credit losses	(4,220)	(3,796)
	₩ 343	618

(4) Advanced payment for leased assets

The amount of capital paid for a new lease that the Group enters into before the commencement of lease term as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Advanced payment for leased assets	₩ 26,161	8,076
Allowance for credit losses	-	-
	₩ 26,161	8,076

(5) Leasehold deposits

The Group withholds collateral money received from the lessees as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Leasehold deposits	₩ 482,281	414,810

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**44. Trust Accounts**

(1) Trust accounts as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Accrued trust fees	₩	9,799	8,083
Borrowings from trust accounts		492,256	870,168
Accrued interest on deposits		511	574

(2) Transactions with trust accounts for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Fees on trust accounts	₩	28,824	28,977
Interest expenses of borrowings from trust accounts		15,648	6,700

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**45. Related Party Transactions**

(1) The Group's related parties as of December 31, 2022 are as follows:

<b>Classification</b>	<b>Corporate name</b>
Associates	Korea Electric Power Co., Ltd., Korea Tourism Organization, Korea Appraisal Board, GM Korea Company, HMM Co., Ltd., HANJIN KAL, Korean Air Lines Co., Ltd., Korea Ocean Business Corporation and 14 others, Keistone Value Investment 2nd Private Equity Fund and 99 others, Hana K-New Deal Unicorn Fund and 112 others
Others	Key management personnel

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**45. Related Party Transactions, Continued**

(2) Significant outstanding balances with related parties as of December 31, 2022 and 2021 are as follows:

	Account		December 31, 2022	December 31, 2021
Associates:				
Korea Electric Power Co., Ltd.	Securities	₩	177,317	10,759
	Loans		227,477	236,223
	Allowances for loan losses		(1,151)	(1,428)
	Derivative financial assets		92,381	2,409
	Other assets		4,409	2,074
	Deposits		23,196	400,963
	Borrowings		2,253	2,649
	Derivative financial liabilities		223,611	149,969
	Other liabilities		57,487	3,434
	Other provisions		59	12
KG Dongbu Steel Co., Ltd. (*)	Loans		-	783,695
	Allowances for loan losses		-	(4,093)
	Other assets		-	375
	Deposits		-	12,294
	Other liabilities		-	76
	Other provisions		-	682
HMM Co., Ltd.	Securities		5,233,622	7,315,547
	Loans		164,292	202,509
	Allowances for loan losses		(2,243)	(30,614)
	Other assets		7,123	7,236
	Deposits		509,920	1,876,483
	Other liabilities		10,468	9,145
HANJIN KAL	Loans		373,445	449,252
	Other assets		481	518
	Deposits		70,000	-
	Other liabilities		1,050	-
Korean Air Lines Co., Ltd.	Loans		1,189,100	-
	Allowances for loan losses		(8,798)	-
	Other assets		11,989	-
	Deposits		1,716,833	-
	Other liabilities		23,075	-
	Derivative financial liabilities		73,131	-
Korea Ocean Business Corporation	Loans		-	15,237
	Allowances for loan losses		-	(2)
	Other assets		-	16
	Deposits		25,000	40,000
	Other liabilities		386	237
Others	Securities		-	1,454
	Loans		209,978	445,904
	Allowances for loan losses		(480)	(8,250)
	Other assets		6,472	6,900
	Deposits		323,333	470,808
	Other liabilities		2,215	2,307
	Other provisions		46	76,500

(\*) For the year ended December 31, 2022, KG Dongbu Steel Co., Ltd. was excluded from the related parties due to the Group's sale of shares.

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**45. Related Party Transactions, Continued**

(3) Significant profit or loss from transactions with related parties for the years ended December 31, 2022 and 2021 are as follows:

	Account	2022	2021
Associates:			
Korea Electric Power Co., Ltd.	Interest income ₩	12,096	2,994
	Dividend income	-	256,862
	Reversal of allowance for loan losses	379	351
	Fees and commission income, other income	136,288	19,298
	Interest expenses	(3,357)	(1,006)
	Other operating expenses	(208,915)	(254,043)
KG Dongbu Steel Co., Ltd. (*1)	Interest income	-	11,889
	Dividend income	-	1,101
	Reversal of allowance for loan losses	-	51,228
	Fees and commission income, other income	-	27,840
	Interest expenses	-	(13)
	Other operating expenses	-	(10,866)
HMM Co., Ltd.	Interest income	42,406	43,330
	Dividend income	60,720	-
	Reversal of allowance for loan losses	28,372	62,402
	Fees and commission income, other income	19,561	1,830,596
	Interest expenses	(7,724)	(3,377)
	Other operating expenses	(192,015)	(85,660)
Hanjin Heavy Industries & Construction Co., Ltd. (*2)	Interest income	-	2,962
	Fees and commission income, other income	-	133,190
	Interest expenses	-	(177)
	Provision for loan losses	-	(3,514)
	Other operating expenses	-	(2,930)
HANJIN KAL	Interest income	6,713	7,012
	Fees and commission income, other income	15	58,399
	Interest expenses	(1,184)	-
	Other operating expenses	(75,807)	-
Korean Air Lines Co., Ltd.	Interest income	44,609	-
	Reversal of allowance for loan losses	13,348	-
	Fees and commission income, other income	62,228	-
	Interest expenses	(41,878)	-
	Other operating expenses	(144,436)	-
Korea Ocean Business Corporation	Interest income	343	213
	Reversal of allowance for loan losses	2	-
	Fees and commission income, other income	2,907	1,338
	Interest expenses	(266)	(237)

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**45. Related Party Transactions, Continued**

	<u>Account</u>	<u>2022</u>	<u>2021</u>
Associates:			
Others	Interest income ₩	6,738	20,066
	Dividend income	218,852	606,017
	Reversal of allowance for loan losses	4	348,053
	Fees and commission income, other income	5,639	23,393
	Interest expenses	(6,422)	(2,332)
	Provision for loan losses	(129)	(641)
	Other operating expenses	(329)	(31,566)

(\*1) The amounts are profit or loss recognized until KG Dongbu Steel Co., Ltd. was excluded from the related parties due to the Group's sale of shares for the year ended December 31, 2022.

(\*2) Hanjin Heavy Industries & Construction Co., Ltd. is excluded from the Group's related parties due to the disposal of shares for the year ended December 31, 2021 and the amounts are profit or loss recognized until the Hanjin Heavy Industries & Construction Co., Ltd. was excluded from the related parties.

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**45. Related Party Transactions, Continued**

(4) Details of guarantees and commitments to the related parties as of December 31, 2022 and 2021 are as follows:

	<b>Account</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Associates:			
KG Dongbu Steel Co., Ltd. (*)	Unconfirmed acceptances and guarantees	₩ -	32,487
	Loan commitments	-	186,021
Korean Air Lines Co., Ltd.	Confirmed acceptances and guarantees	177,367	-
Others	Loan commitments	426,085	221,182
		₩ 603,452	439,690

(\*) For the year ended December 31, 2022, KG Dongbu Steel Co., Ltd. was excluded from the related parties due to the Group's sale of shares.

(5) Details of compensation to key management personnel for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Short-term employee benefits	₩ 6,453	6,341
Post-employment benefits	766	356
	₩ 7,219	6,697

(6) The Group is not pledged any assets as collaterals to the related parties and from the related parties as of December 31, 2022 and 2021.

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**46. Disclosure of Interests in Other Entities**

(1) Commitments of financial support for consolidated structured entities

The contractual commitments offered by the Group to the consolidated structured entities as of December 31, 2022 and 2021 are as follows:

	December 31, 2022	December 31, 2021
<b>Associates:</b>		
Corporate Liquidity Assistance Agency Co., Ltd. (*) ₩	560,000	560,000
Sinoker SF 4th Co., Ltd. (*)	5,625	45,000
K-Five 9th Securitization Specialty Co., Ltd. (*)	-	20,000
KKC 2ND INC. (*)	-	30,000
KDB ESG 1ST INC. (*)	-	100,500
KDB ESG 2ND INC. (*)	-	155,500
KDB ESG 3RD INC. (*)	-	150,800
PROPERTY KDB 1ST INC. (*)	30,000	-
ENMKDB 1ST INC. (*)	50,000	-
₩	<u>645,625</u>	<u>1,061,800</u>

(\*) The Group made a commitment on loans for consolidated structured entities. According to the commitment, the Group guarantees loan to a subsidiary when the subsidiary has insufficient working capital.

(2) Nature and scope of interests in unconsolidated structured entities

Details of unconsolidated structured entities as of December 31, 2022 and 2021 are as follows:

Type	Characteristics and objective	Financing method
Investment funds and investment trusts (*1)	Investment and distribution	Equity investment and fund operations, etc.
Real estate finance (*2)	Real estate development and infrastructure investment, etc.	Equity investment and credit reinforcement, etc.
Asset-backed securitization	Securitization of underlying assets	Issuance of ABL and ABCP, etc.
Shipping and acquisition finance	Providing funds for acquisition of corporate or ships	Equity investment and fund operations, etc.

(\*1) PEF, investment association, beneficiary certificate, etc.

(\*2) SPC, PF, SOC, etc.

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**46. Disclosure of Interests in Other Entities, Continued**

(3) Nature of related risks

The carrying amount of and maximum exposure to loss from interests in unconsolidated structured entities as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>					
		Investment funds and investment trusts	Real estate finance	Asset-backed securitization	Shipping and acquisition finance	Others	Total
Assets:							
Securities	₩	11,195,851	314,300	54,307	2,114	375	11,566,947
Loans		2,079,727	9,753,470	1,007,058	1,690,082	4,652,124	19,182,461
Derivatives		42,471	520	11,187	-	-	54,178
Others		63,162	45,108	1,882	5,355	24,525	140,032
		13,381,211	10,113,398	1,074,434	1,697,551	4,677,024	30,943,618
Liabilities:							
Provisions		215	1,611	153	72	594	2,645
Financial guarantees		-	-	702	-	1,815	2,517
Derivatives		51,593	1,641	17,474	-	7,653	78,361
Others		9,450	10,456	1,285	275	4,080	25,546
		61,258	13,708	19,614	347	14,142	109,069
Granting of credit and other commitments		282,484	1,602,742	517,848	82,542	853,225	3,338,841
Maximum exposure to loss (*)	₩	13,663,695	11,716,140	1,592,282	1,780,093	5,530,249	34,282,459

(\*) Maximum exposure to loss is calculated by summarizing related assets (after adjusting impairment loss on securities, allowance for loan losses, etc.), granting of credit and other commitments.

		<b>December 31, 2021</b>					
		Investment funds and investment trusts	Real estate finance	Asset-backed securitization	Shipping and acquisition finance	Others	Total
Assets:							
Securities	₩	9,049,362	319,205	190,652	3,727	375	9,563,321
Loans		1,851,419	9,276,341	932,618	1,210,208	5,080,851	18,351,437
Derivatives		9,936	1,898	2,272	-	2,805	16,911
Others		10,390	26,655	1,453	3,105	21,301	62,904
		10,921,107	9,624,099	1,126,995	1,217,040	5,105,332	27,994,573
Liabilities:							
Provisions		138	1,955	168	56	1,003	3,320
Financial guarantees		-	-	10,913	-	439	11,352
Derivatives		15,226	44	15,174	-	662	31,106
Others		7,708	3,510	172	174	2,908	14,472
		23,072	5,509	26,427	230	5,012	60,250
Granting of credit and other commitments		170,070	2,326,019	895,605	73,718	823,647	4,289,059
Maximum exposure to loss (*)	₩	11,091,177	11,950,118	2,022,600	1,290,758	5,928,979	32,283,632

(\*) Maximum exposure to loss is calculated by summarizing related assets (after adjusting impairment loss on securities, allowance for loan losses, etc.), granting of credit and other commitments.

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**46. Disclosure of Interests in Other Entities, Continued**

(4) Significant non-controlling interests

Details of significant non-controlling interests and summary of financial information as of December 31, 2022 and 2021 are as follows:

- Non-controlling interests:

<b>December 31, 2022</b>				
	Non-controlling interests ownership (%)	Profit (loss) on non-controlling interests	Non-controlling interests	Dividend to non-controlling interests
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	44.32	₩ (773,306)	1,629,074	-
<b>December 31, 2021</b>				
	Non-controlling interests ownership (%)	Profit (loss) on non-controlling interests	Non-controlling interests	Dividend to non-controlling interests
Daewoo Engineering & Construction Co., Ltd.	48.66	₩ 205,231	1,697,922	-
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	44.32	(753,384)	2,283,106	-

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**46. Disclosure of Interests in Other Entities, Continued**

- Summary of financial information:

		<b>December 31, 2022</b>							
		Assets	Liabilities	Operating revenue	Profit (loss) for the year	Total comprehensive Income (loss)	Cash flows from operating activities	Cash flows from investing activities	Cash flows from financing activities
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	₩	12,235,665	11,490,693	4,860,150	(1,744,778)	(1,472,612)	(1,065,433)	87,974	(129,780)
		<b>December 31, 2021</b>							
		Assets	Liabilities	Operating revenue	Profit (loss) for the year	Total comprehensive Income (loss)	Cash flows from operating activities	Cash flows from investing activities	Cash flows from financing activities
Daewoo Engineering & Construction Co. Ltd.	₩	10,457,977	7,241,599	8,685,208	484,685	537,466	1,746,845	(916,461)	(581,481)
Daewoo Shipbuilding & Marine Engineering Co., Ltd.		10,623,210	8,405,626	4,486,586	(1,699,829)	(1,650,289)	485,787	101,326	(157,013)

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**47. Statements of Cash Flows**

(1) Cash and cash equivalents in the consolidated statements of cash flows as of December 31, 2022 and 2021 are as follows:

		<u>December 31, 2022</u>	<u>December 31, 2021</u>
Cash and due from banks:			
Cash and foreign currencies	₩	730,429	618,444
Due from banks in Korean won		4,402,207	6,448,589
Due from banks in foreign currencies / off-shores		6,304,386	4,786,331
		<u>11,437,022</u>	<u>11,853,364</u>
Less: Restricted due from banks, others		(2,956,324)	(2,560,841)
Add: Financial instruments reaching maturity within three months from date of acquisition			
Securities measured at FVTPL			
Government and public bonds		39,903	-
Loans measured at amortized cost:			
Call loans		2,249,447	499,240
Inter-bank loans		2,494,555	233,898
		<u>4,783,905</u>	<u>733,138</u>
Cash and cash equivalents	₩	<u>13,264,603</u>	<u>10,025,661</u>

(2) Significant transactions not involving cash flows for the years ended December 31, 2022 and 2021 are as follows:

		<u>2022</u>	<u>2021</u>
Decrease in loans due to write-offs	₩	86,785	36,484
Increase in securities measured at FVOCI due to debt-to-equity swap and others		13,505	146,185
Increase in securities measured at FVOCI due to in-kind equity		565,000	-
Increase in investments in subsidiaries due to debt-to-equity swap, etc.		-	2,658,000
Increase (decrease) in accumulated other comprehensive income due to securities valuation		(4,322,313)	3,315,848
Transfer from property and equipment to investment property		937	4,004
Reclassification to assets held for sale		(740,184)	2,579,890
Recognition of right-of-use assets and lease liabilities		102,506	122,850

**48. Transfers of Financial Instruments**

Details of financial assets and liabilities related to repurchase agreements and loaned securities sold and loaned debt securities that do not qualify for derecognition as of December 31, 2022 and 2021 are as follows:

		<u>December 31, 2022</u>		<u>December 31, 2021</u>	
Characteristics of transactions		Carrying amounts for transferred assets	Carrying amounts for related liabilities	Carrying amounts for transferred assets	Carrying amounts for related liabilities
Repurchase agreements	₩	2,373,401	68,894	3,349,080	1,307,268
Loaned securities		-	-	417,640	-
	₩	<u>2,373,401</u>	<u>68,894</u>	<u>3,766,720</u>	<u>1,307,268</u>

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**49. Fair Value of Financial Assets and Liabilities**

The Group classifies and discloses fair value of the financial instruments into the following three-level hierarchy:

- Level 1: Financial instruments measured at quoted prices from active markets are classified as level 1.
- Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.
- Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

(1) Fair value hierarchy of financial instruments measured at fair value

(i) The fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>			
		Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>					
Securities measured at FVTPL	₩	722,449	1,223,780	17,164,180	19,110,409
Securities measured at FVOCI		7,024,255	23,691,362	16,265,065	46,980,682
Loans measured at FVTPL		-	-	542,619	542,619
Derivative financial assets		54	9,377,150	13,768	9,390,972
	₩	<u>7,746,758</u>	<u>34,292,292</u>	<u>33,985,632</u>	<u>76,024,682</u>
<b>Financial liabilities:</b>					
Financial liabilities designated at FVTPL	₩	-	1,469,724	-	1,469,724
Derivative financial liabilities		34	11,360,382	48,834	11,409,250
	₩	<u>34</u>	<u>12,830,106</u>	<u>48,834</u>	<u>12,878,974</u>
		<b>December 31, 2021</b>			
		Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>					
Securities measured at FVTPL	₩	680,895	481,500	10,575,935	11,738,330
Securities measured at FVOCI		2,386,076	17,970,377	18,707,937	39,064,390
Loans measured at FVTPL		-	-	644,412	644,412
Derivative financial assets		1	5,090,886	11,075	5,101,962
	₩	<u>3,066,972</u>	<u>23,542,763</u>	<u>29,939,359</u>	<u>56,549,094</u>
<b>Financial liabilities:</b>					
Financial liabilities designated at FVTPL	₩	-	2,067,144	-	2,067,144
Derivative financial liabilities		2	4,735,732	17,104	4,752,838
	₩	<u>2</u>	<u>6,802,876</u>	<u>17,104</u>	<u>6,819,982</u>

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**49. Fair Value of Financial Assets and Liabilities, Continued**

(ii) Changes in the fair value of level 3 financial instruments for the years ended December 31, 2022 and 2021 are as follows:

		2022							
		January 1, 2022	Profit or loss	Other comprehen- sive income (loss)	Acquisition / Issue	Sale/ Settlement	Others	December 31, 2022	
Financial assets:									
Securities measured at FVTPL	₩	10,575,935	(31,931)	-	7,151,734	(672,039)	140,481	17,164,180	
Securities measured at FVOCI		18,707,937	-	(2,325,232)	1,344,705	(853,911)	(608,434)	16,265,065	
Loans measured at FVTPL		644,412	(78,884)	-	50,950	(73,859)	-	542,619	
Derivatives financial assets		11,075	5,457	850	-	(3,607)	(7)	13,768	
	₩	<u>29,939,359</u>	<u>(105,358)</u>	<u>(2,324,382)</u>	<u>8,547,389</u>	<u>(1,603,416)</u>	<u>(467,960)</u>	<u>33,985,632</u>	
Financial liabilities:									
Derivatives financial liabilities	₩	17,104	31,952	-	-	-	(222)	48,834	
		2021							
		January 1, 2021	Profit or loss	Other comprehen- sive income (loss)	Acquisition / Issue	Sale/ Settlement	Reclassifi- cation	Others	December 31, 2021
Financial assets:									
Securities measured at FVTPL	₩	8,668,833	211,802	-	2,827,011	(848,835)	(235,774)	(47,102)	10,575,935
Securities measured at FVOCI		14,746,377	-	3,770,412	467,451	(157,863)	(13,823)	(104,617)	18,707,937
Loans measured at FVTPL		1,434,514	-	-	-	(790,102)	-	-	644,412
Derivatives financial assets		12,511	7,205	-	-	(8,641)	-	-	11,075
	₩	<u>24,862,235</u>	<u>219,007</u>	<u>3,770,412</u>	<u>3,294,462</u>	<u>(1,805,441)</u>	<u>(249,597)</u>	<u>(151,719)</u>	<u>29,939,359</u>
Financial liabilities:									
Derivatives financial liabilities	₩	13,404	3,421	-	-	-	-	279	17,104

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**49. Fair Value of Financial Assets and Liabilities, Continued**

(iii) Changes in deferred day one profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 3,989	4,375
Amortization	(385)	(386)
Ending balance	₩ 3,604	3,989

(iv) Details of valuation technique and inputs used in the fair value measurement categorized within level 2 of the fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

	<b>Valuation technique</b>	<b>Input</b>
Securities measured at FVTPL:		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Securities measured at FVOCI:		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Derivatives financial assets:		
Interest rate swaps	Discounted cash flow method,	Discount rate, Exchange rate,
Currency forwards and swaps	Black-Scholes model,	Volatility, Commodity index,
Currency options	Modified Black model,	etc.
Commodities options	Formula model	
Financial liabilities measured at FVTPL:		
Debentures	Discounted cash flow method	Discount rate

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49. **Fair Value of Financial Assets and Liabilities, Continued**

(v) Details of valuation technique and quantitative information about unobservable inputs used in the fair value measurement categorized within level 3 of the fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
	<u>Valuation technique</u>	<u>Unobservable input</u>	<u>Range (%)</u>
Securities measured at FVTPL:			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate Rate of increase in liquidation value Rate of increase in property disposal price Volatility	6.35 ~ 41.31 - - 16.89 ~ 44.54
Securities measured at FVOCI:	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate	9.08 ~ 18.51
Equity securities		Growth rate Volatility	- 16.52 ~ 46.53
Loans measured at FVTPL			
Convertible bonds, etc.	LSCM, Binomial model	Volatility	16.89 ~ 44.54
Derivatives financial assets:			
Interest rate swaps	Discounted cash flow method	Volatility Correlation coefficient	80.87 ~ 102.80 0.87 ~ 0.95
Interest rate options	Modified Black model	Volatility	80.87 ~ 102.80
Stock index options	Black-Scholes model	Volatility	8.70 ~ 72.20

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49. **Fair Value of Financial Assets and Liabilities, Continued**

		<b>December 31, 2021</b>	
	<u>Valuation technique</u>	<u>Unobservable input</u>	<u>Range (%)</u>
Securities measured at FVTPL:			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate Rate of increase in liquidation value Rate of increase in property disposal price Volatility	6.52 ~ 13.22 - - 17.89 ~ 41.50
Securities measured at FVOCI:			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate Growth rate	7.70 ~ 17.56 -
		Volatility	19.48 ~ 33.20
Loans measured at FVTPL			
Convertible bonds, etc.	LSCM, Binomial model	Volatility	17.89 ~ 34.16
Derivatives financial assets:			
Interest rate swaps	Discounted cash flow method	Volatility Correlation coefficient	38.23 ~ 49.07 0.43 ~ 0.87
Interest rate options	Modified Black model	Volatility	38.23 ~ 49.07
Stock index options	Black-Scholes model	Volatility	5.40 ~ 71.40
Equity options	Discounted cash flow method and others	Volatility	18.87 ~ 25.49

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**49. Fair Value of Financial Assets and Liabilities, Continued**

(2) Fair value hierarchy of financial instruments disclosed by fair value

(i) The Group's policies for measuring fair value of financial instruments at amortized costs are as follows:

- Cash and due from banks: Fair value of cash is considered equivalent to the carrying amount. In the case of due from banks on demand, which do not have a set maturity and can be realized instantly, the carrying amount is a close estimate of the fair value and is assumed so. In the case of other ordinary due from banks, the cash flow discount method is used to estimate the fair value.
- Securities measured at amortized cost: The fair value of securities measured at amortized cost is computed by widely-accepted appraisal agencies upon request.
- Loans measured at amortized cost: The fair value of loans measured at amortized cost is the expected future cash flows, reflecting premature redemption ratio, discounted by the market interest rate, adjusted by a spread sheet considering the probability of default. Exceptions to this method include loans with credit line facilities, loans with a maturity of three months or less left and impaired loans, which the Group assumes the carrying amount as the fair value.
- Deposits: The fair value of deposits is computed using the discounted cash flow method. However, for deposits, whose cash flows cannot be estimated reasonably, the Bank assumes the carrying amount as the fair value.
- Borrowings: The fair value of industrial financial debentures is computed using the discounted cash flow method by the Group's Fair Value Evaluation System. However, for borrowings including call money whose contractual maturity is three months or less, the Group assumes the carrying amount as the fair value.
- Debentures: The fair value of industrial financial debentures is computed using the discounted cash flow method by the Group's Fair Value Evaluation System.
- Other financial assets and liabilities: The fair value of other financial assets and liabilities is computed using the discounted cash flow method. However, in cases cash flow cannot be estimated reasonably, the Group assumes the carrying amount as the fair value.

(ii) The fair value hierarchy of financial instruments measured at amortized costs as of December 31, 2022 and 2021 are as follows:

		December 31, 2022			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	8,480,698	2,956,324	-	11,437,022
Securities measured at amortized cost		2,964,285	7,036,358	-	10,000,643
Loans measured at amortized cost (*)		-	2,249,447	206,941,611	209,191,058
Other financial assets (*)		-	6,343,473	1,923,304	8,266,777
	₩	<u>11,444,983</u>	<u>18,585,602</u>	<u>208,864,915</u>	<u>238,895,500</u>
Financial liabilities:					
Deposits (*)	₩	-	3,416,449	66,814,999	70,231,448
Borrowings (*)		-	2,182,613	27,664,925	29,847,538
Debentures		-	163,894,194	-	163,894,194
Other financial liabilities (*)		-	2,837,612	4,613,200	7,450,812
	₩	<u>-</u>	<u>172,330,868</u>	<u>99,093,124</u>	<u>271,423,992</u>

(\*) For financial instruments categorized as level 2, the carrying amount is considered as a reasonable approximation of the fair value and is thus, disclosed by fair value.

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**49. Fair Value of Financial Assets and Liabilities, Continued**

		<b>December 31, 2021</b>			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	9,292,523	2,560,841	-	11,853,364
Securities measured at amortized cost		1,437,496	4,766,362	-	6,203,858
Loans measured at amortized cost (*)		-	499,240	178,256,343	178,755,583
Other financial assets (*)		-	5,095,939	1,289,903	6,385,842
	₩	<u>10,730,019</u>	<u>12,922,382</u>	<u>179,546,246</u>	<u>203,198,647</u>
Financial liabilities:					
Deposits (*)	₩	-	3,318,883	50,482,483	53,801,366
Borrowings (*)		-	2,025,900	26,033,403	28,059,303
Debentures		-	151,130,983	-	151,130,983
Other financial liabilities (*)		-	3,920,893	3,715,506	7,636,399
	₩	<u>-</u>	<u>160,396,659</u>	<u>80,231,392</u>	<u>240,628,051</u>

(\*) For financial instruments categorized as level 2, the carrying amount is considered as a reasonable approximation of the fair value and is thus, disclosed by fair value.

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**49. Fair Value of Financial Assets and Liabilities, Continued**

- (iii) Details of valuation technique and inputs used in the fair value measurement categorized within level 2 and level 3 of the fair value hierarchy of financial instruments measured at amortized cost as of December 31, 2022 and 2021 are as follows:

	<b>Valuation technique</b>	<b>Input</b>
Level 2		
Financial assets:		
Securities measured at amortized cost	Discounted cash flow method	Discount rate
Financial liabilities:		
Debentures	Discounted cash flow method	Discount rate
Level 3		
Financial assets:		
Loans measured at amortized cost	Discounted cash flow method	Credit spread, Other spread, Prepayment rate
Other financial assets	Discounted cash flow method	Other spread
Financial liabilities:		
Deposits	Discounted cash flow method	Other spread
Borrowings	Discounted cash flow method	Other spread
Other financial liabilities	Discounted cash flow method	Other spread

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**50. Categories of Financial Assets and Liabilities**

Categories of financial assets and liabilities as of December 31, 2022 and 2021 are as follows:

		December 31, 2022						
		Cash and cash equivalents	Financial instruments measured at FVTPL	Financial instruments designated at FVTPL	Financial instruments measured at FVOCI	Financial instruments designated at FVOCI	Financial instruments measured at amortized cost	Hedging purpose derivative instruments
								Total
Financial assets:								
Cash and due from banks	₩	8,480,698	-	-	-	-	2,956,324	-
Securities measured at FVTPL		39,903	19,070,506	-	-	-	-	-
Securities measured at FVOCI		-	-	-	29,827,980	17,152,702	-	-
Securities measured at amortized cost		-	-	-	-	-	10,212,258	-
Loans measured at FVTPL		-	542,619	-	-	-	-	-
Loans measured at amortized cost		4,744,002	-	-	-	-	206,113,624	-
Derivative financial assets		-	8,751,738	-	-	-	-	639,234
Other financial assets		-	-	-	-	-	8,338,617	-
	₩	13,264,603	28,364,863	-	29,827,980	17,152,702	227,620,823	639,234
Financial liabilities:								
Financial liabilities measured at FVTPL	₩	-	-	1,469,724	-	-	-	-
Deposits		-	-	-	-	-	70,288,133	-
Borrowings		-	-	-	-	-	30,131,079	-
Debentures		-	-	-	-	-	164,460,858	-
Derivative financial liabilities		-	10,066,680	-	-	-	-	1,342,570
Other financial liabilities		-	-	-	-	-	7,381,131	-
	₩	-	10,066,680	1,469,724	-	-	272,261,201	1,342,570

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**50. Categories of Financial Assets and Liabilities, Continued**

		December 31, 2021							
		Cash and cash equivalents	Financial instruments measured at FVTPL	Financial instruments designated at FVTPL	Financial instruments measured at FVOCI	Financial instruments designated at FVOCI	Financial instruments measured at amortized cost	Hedging purpose derivative instruments	Total
Financial assets:									
Cash and due from banks	₩	9,292,523	-	-	-	-	2,560,841	-	11,853,364
Securities measured at FVTPL		-	11,738,330	-	-	-	-	-	11,738,330
Securities measured at FVOCI		-	-	-	20,181,099	18,883,291	-	-	39,064,390
Securities measured at amortized cost		-	-	-	-	-	6,203,858	-	6,203,858
Loans measured at FVTPL		-	644,412	-	-	-	-	-	644,412
Loans measured at amortized cost		733,138	-	-	-	-	178,449,217	-	179,182,355
Derivative financial assets		-	4,560,320	-	-	-	-	541,642	5,101,962
Other financial assets		-	-	-	-	-	6,441,337	-	6,441,337
	₩	10,025,661	16,943,062	-	20,181,099	18,883,291	193,655,253	541,642	260,230,008
Financial liabilities:									
Financial liabilities measured at FVTPL									
Deposits	₩	-	-	2,067,144	-	-	-	-	2,067,144
Borrowings		-	-	-	-	-	53,839,129	-	53,839,129
Debentures		-	-	-	-	-	28,561,063	-	28,561,063
Derivative financial liabilities		-	-	-	-	-	150,014,919	-	150,014,919
Other financial liabilities		-	4,496,682	-	-	-	-	256,156	4,752,838
	₩	-	-	-	-	-	7,564,991	-	7,564,991
	₩	-	4,496,682	2,067,144	-	-	239,980,102	256,156	246,800,084

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**51. Offsetting of Financial Assets and Liabilities**

Details of financial instruments subject to offsetting, enforceable master netting agreements or similar agreements as of December 31, 2022 and 2021 are as follows:

December 31, 2022						
	Gross amounts of recognized financial asset	Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral received	
Derivative financial assets (*) ₩	9,390,972	-	9,390,972	5,806,085	71,536	3,513,351
Unsettled spot exchange receivables (*)	2,597,494	-	2,597,494	2,593,577	-	3,917
Unsettled domestic exchange receivables	6,007,285	2,261,306	3,745,979	-	-	3,745,979
Security pledged as collateral for repurchase agreements	2,373,401	-	2,373,401	68,894	-	2,304,507
Reverse repurchase agreements	2,247,487	-	2,247,487	2,247,487	-	-
Receivables from securities transaction	11,940	-	11,940	11,940	-	-
₩	22,628,579	2,261,306	20,367,273	10,727,983	71,536	9,567,754

December 31, 2022						
	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral pledged	
Derivative financial liabilities (*) ₩	11,409,250	-	11,409,250	5,544,291	501	5,864,458
Unsettled spot exchange payables (*)	2,593,992	-	2,593,992	2,593,577	-	415
Unsettled domestic exchange payables	2,504,926	2,261,306	243,620	-	-	243,620
Repurchase agreements	68,894	-	68,894	68,894	-	-
Payables from securities transaction	18,305	-	18,305	18,305	-	-
₩	16,595,367	2,261,306	14,334,061	8,225,067	501	6,108,493

(\*) For the derivatives covered by the ISDA derivative contracts, all contracts are settled and the net amount of derivative contracts is measured and paid based on the liquidation value if the counterparty files for bankruptcy or has any credit issues.

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**51. Offsetting of Financial Assets and Liabilities, Continued**

December 31, 2021						
	Gross amounts of recognized financial asset	Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral received	
Derivative financial assets (*) ₩	5,101,962	-	5,101,962	3,774,948	17,515	1,309,499
Unsettled spot exchange receivables (*)	3,302,487	-	3,302,487	3,301,014	-	1,473
Unsettled domestic exchange receivables	3,500,909	1,707,457	1,793,452	-	-	1,793,452
Security pledged as collateral for repurchase agreements	3,349,080	-	3,349,080	1,307,268	-	2,041,812
Reverse repurchase agreements	818,442	-	818,442	818,442	-	-
Loaned securities	417,640	-	417,640	417,640	-	-
Receivables from securities transaction	12,553	-	12,553	12,553	-	-
₩	16,503,073	1,707,457	14,795,616	9,631,865	17,515	5,146,236

December 31, 2021						
	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral pledged	
Derivative financial liabilities (*) ₩	4,752,838	-	4,752,838	2,993,406	105,989	1,653,443
Unsettled spot exchange payables (*)	3,303,447	-	3,303,447	3,301,014	-	2,433
Unsettled domestic exchange payables	2,324,903	1,707,457	617,446	-	-	617,446
Repurchase agreements	1,307,268	-	1,307,268	1,307,268	-	-
Payables from securities transaction	10,036	-	10,036	10,036	-	-
₩	11,698,492	1,707,457	9,991,035	7,611,724	105,989	2,273,322

(\*) For the derivatives covered by the ISDA derivative contracts, all contracts are settled and the net amount of derivative contracts is measured and paid based on the liquidation value if the counterparty files for bankruptcy or has any credit issues.

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**52. Operating Segments**

- (1) The Group has seven reportable segments, as described below, which are the Group's strategic business units. They are managed separately because each business requires different technology and marketing strategies. The following summary describes general information about each of the Group's reportable segments:

Segments		General information
Bank industry	Corporate finance	Provides trading services and loans to corporate customers
	Investment finance	Provides consulting services to corporate such as capital finance, restructuring, etc.
	Asset management	Provides asset management services to individual and corporate customers
	Others	Any other segment not mentioned above
Insurance		Subsidiaries that conduct insurance business (KDB Life Insurance Co., Ltd.)
Overseas		Subsidiaries located in foreign countries
Other subsidiaries		Subsidiaries except for overseas subsidiaries and subsidiaries conducting insurance business

- (2) Operating income (loss) from external customers and among operating segments for the years ended December 31, 2022 and 2021 are as follows:

2022									
	Bank industry				Insurance	Overseas	Other subsidiaries	Adjustment	Total(*)
	Corporate finance	Investment finance	Asset management	Others					
Operating income (loss) from external customers	₩ (557,322)	(2,636,244)	32,111	3,495,076	467,399	84,575	448,590	-	1,334,185
Operating income (loss) from intersegment transactions	1,138,291	2,407,248	-	(2,121,462)	161,357	45,409	46,818	(1,677,661)	-
	₩ 580,969	(228,996)	32,111	1,373,614	628,756	129,984	495,408	(1,677,661)	1,334,185

(\*) Profit from discontinued operations is not included.

2021									
	Bank industry				Insurance	Overseas	Other subsidiaries	Adjustment	Total(*)
	Corporate finance	Investment finance	Asset management	Others					
Operating income (loss) from external customers	₩ (924,406)	1,195,329	20,822	1,745,729	77,740	75,253	430,669	-	2,621,136
Operating income (loss) from intersegment transactions	864,685	1,407,971	-	(759,974)	-	4,280	(148,669)	(1,368,293)	-
	₩ (59,721)	2,603,300	20,822	985,755	77,740	79,533	282,000	(1,368,293)	2,621,136

(\*) Profit from discontinued operations is not included.

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52. Operating Segments, Continued

(3) Details of segment results for the Group's reportable segments for the years ended December 31, 2022 and 2021 are as follows:

2022										
Bank industry										
		Corporate finance	Investment finance	Asset management	Others	Insurance	Overseas	Other subsidiaries	Adjustment	Total(*3)
Net interest income (expense)	₩	871,204	(463,883)	9,421	1,327,073	536,627	176,374	358,206	(55,449)	2,759,573
Non-interest income (expense)										
Income (expense) related to securities (*1)		(17,602)	(136,455)	-	57,390	(153,814)	4,124	52,842	41,331	(152,184)
Other non- interest income (expense)		512,909	778,925	36,351	934	(443,355)	(3,270)	170,159	(1,306,938)	(254,285)
		495,307	642,470	36,351	58,324	(597,169)	854	223,001	(1,265,607)	(406,469)
Provision for loan losses and others (*2)		(42,977)	(297,285)	-	(1,936)	691,423	9,594	(4,843)	(356,067)	(2,091)
General and administrative expenses		(742,565)	(110,298)	(13,661)	(9,847)	(2,125)	(56,838)	(80,956)	(538)	(1,016,828)
Operating income (loss)	₩	580,969	(228,996)	32,111	1,373,614	628,756	129,984	495,408	(1,677,661)	1,334,185
2021										
Bank industry										
		Corporate finance	Investment finance	Asset management	Others	Insurance	Overseas	Other subsidiaries	Adjustment	Total(*3)
Net interest income (expense)	₩	1,181,059	(158,369)	2,328	633,590	503,442	99,756	(208,436)	437,183	2,490,553
Non-interest income (expense)										
Income (expense) related to securities (*1)		63,729	17,194	-	26,455	(13,828)	17,404	138,505	(70,107)	179,352
Other non- interest income (expense)		602,797	2,807,532	36,449	(21,532)	(412,371)	10,324	432,906	(2,173,972)	1,282,133
		666,526	2,824,726	36,449	4,923	(426,199)	27,728	571,411	(2,244,079)	1,461,485
Provision for loan losses and others (*2)		(924,878)	95,316	-	4,232	2,529	1,450	5,617	424,781	(390,953)
General and administrative expenses		(982,428)	(158,373)	(17,955)	343,010	(2,032)	(49,401)	(86,592)	13,822	(939,949)
Operating income (loss)	₩	(59,721)	2,603,300	20,822	985,755	77,740	79,533	282,000	(1,368,293)	2,621,136

(\*1) Income related to securities is composed of net gain (loss) on securities measured at FVTPL, securities measured at FVOCI and securities measured at amortized cost.

(\*2) Provision for loan losses and others comprises provision for loan losses, provision for derivative credit risks, gains (losses) on sales of loans, and increase (reversal) of provision.

(\*3) Profit from discontinued operations is not included.

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**52. Operating Segments, Continued**

- (4) Geographical revenue information for the years ended December 31, 2022 and 2021 and the geographical non-current asset information as of December 31, 2022 and 2021 are as follows:

	Revenues (*1)		Non-current assets (*2)	
	2022	2021	December 31, 2022	December 31, 2021
Domestic	₩ 52,206,828	34,615,636	23,570,664	33,095,736
Overseas	2,699,481	1,050,037	110,165	132,814
	₩ 54,906,309	35,665,673	23,680,829	33,228,550

- (\*1) Revenues consist of interest income, fees and commission income, dividend income, income related to securities, foreign currency transaction gain, gain on derivative, other operating income and provision for loan losses.
- (\*2) Non-current assets consist of investments in associates, property and equipment, investment properties and intangible assets.

**53. Risk Management**

**(1) Introduction**

**(i) Objectives and principles**

The Group's risk management aims to maintain financial soundness and effectively manage various risks pertinent to the nature of the Group's business. The Group has set up and fulfilled policies to manage risks timely and effectively. Pursuant to the policies, the Group's risks shall be

- managed comprehensively and independently,
- recognized timely, evaluated exactly and managed effectively,
- maintained to the extent that the risks balance with profit,
- diversified appropriately to avoid concentration on specific segments,
- managed to prevent excessive exposure by the setting up and managing of tolerance limits and guidelines.

**(ii) Risk management strategy and process**

The Group's risk management business is separated into two different stages; the 'metrification stage,' in which risks are estimated and monitored, and the 'integration stage,' in which information gained during the risk management process is integrated and used in management strategies. Risk management is recognized as a key component of the Group's management, and seeks to change from its previously adaptive and limited role to more leading and comprehensive role.

Furthermore, the Group focuses on consistent communication among different departments in order to establish a progressive consensus on risk management.

**(iii) Risk management governance**

*Risk Management Committee*

The Group's Risk Management Committee (the "Committee") is composed of the President of the committee (an outside director), and three other commissioners including the CEO of the Bank. The Committee functions to establish policies of risk management, evaluate the capital adequacy of the Group, discuss material issues relating to risk management, and present preliminary decisions on such matters.

*The CEO of the Bank and the head of Risk Management Segment*

The CEO of the Bank, according to the policies of risk management, performs his or her role to manage and direct risk management in order to sustain efficiency and internal control. The head of the Risk Management Segment is responsible for supervising the overall administration of the Group's risk management business and providing risk-related information to members of the board of directors and the Group's management.

*Risk Management Policy Committee*

The Group's Risk Management Policy Committee is composed of the leaders of all business segments. and exercises its role to decide important matters relating to the Group's portfolio including allocating internal capital limits by segment and setting exposure limits by industry within the scope that Risk Management Committee regulated.

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**53. Risk Management, Continued**

***(iv) Performance of risk management committee***

The Risk Management Committee performs comprehensive reviews of all the affairs related to risk management and deliberates the decisions of the board of directors. For the year ended December 31, 2021, the key activities of the Risk Management Committee are as follows:

- Major decision
  - Risk management plan for 2022
  - Contingency funding plan for 2022
  - Setting and managing exposure limits by country for 2022
  - Increase of internal capital limit for interest rate risk of Korean won
- Major reporting
  - Result of integrated crisis analysis for the second half of 2021
  - Resolution of Credit Committee for the fourth quarter of 2021
  - Result of ex-post validation of credit rating system and default rates, and verification of risk measurement factors for internal purposes
  - Setting management limit of credit portfolios of 2022
  - Allocation of internal capital limits of 2022
  - Resolution of Credit Committee for the first quarter of 2022
  - Changes the period of the additional allowance for loan losses for COVID-19 forbearance companies
  - Increase of industry limits for feed manufacturing considering external factors
  - Result of operation of corporate credit rating system in 2022
  - Result of integrated crisis analysis for the first half of 2022
  - Resolution of Credit Committee for the second quarter of 2022
  - Verification of risk-weighted assets for BIS ratio as of December 31, 2021
  - Review of the outlook and management plan for the BIS ratio
  - Result of assessment of suitability for internal capital for 2022
  - Result of BCP training for 2022
  - Result of integrated crisis analysis for the second half of 2022
  - Resolution of Credit Committee for the third quarter of 2022

***(v) Improvement of risk management system***

For the continuous improvement of risk management, financial soundness and capital adequacy, the Group performs the following:

- Continuous improvement of Basel
  - Improvements in the internal capital adequacy assessment system, in line with the guidelines set by the Financial Supervisory Service (FSS) in 2008, to manage capital adequacy more effectively
  - Improvements in the credit assessment system on Low Default Portfolio (LDP)
  - Elaboration of risk measuring criteria including credit risk parameters and measurement logics
  - Development of the application system for timely calculation of LCR and NSFR
  - Rebuilding the Corporate Credit Rating System (approved by Financial Supervisory Services on October 26, 2017)
  - Establishment of the system to calculate Basel Interest Rate Risk in the Banking Book coming to domestic in September 2018
  - Establishment of the system to comply with the amended regulation relating to risk-weighted assets under Basel III in December 2020
  - Development of system related to Fundamental Review of the Trading Book (FRTB) under Basel III in August 2022
  - Development of system related to operational risk under Basel III in September 2022
- Expansion of risk management infrastructure to the global IB level
  - Establishment of the RAPM system to reflect risks to the Bank's business and support decision-making upon management, and application of performance assessment at the branch level since 2010
  - Enforcement of risk management related to irregular compound derivatives and validation of the derivative pricing model developed by the Bank's Front Office
  - Establishment of IFRS 9 accounting system to calculate a loan loss allowances under IFRS 9 in March 2017 and, since then, run of IFRS 9 accounting system in January 2018

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53. **Risk Management, Continued**

***(vi) Risk management reporting and measuring system***

The Group endeavours consistently to objectively and rationally measure and manage all significant risks considering the characteristics of operational areas, assets and risks. In relation to reporting and measurement, the Group has developed application systems as follows:

Application system	Approach	Completion date	Major function
Corporate Credit Rating System	Logit Model	Oct. 2017	Rebuilding the Corporate Credit Rating System
Market Risk Management System	Risk Watch	Jun. 2002	Summarize position, manage exposure
		Feb. 2019	limits and calculate Market VaR
	RS Model	Sep. 2012	Calculate regulatory capital by Standardized Approach
	Murex M/O	Apr. 2013	Supplement of Risk Watch to calculate VaR
Interest/Liquidity Risk Management System	In-house	May. 2019	Calculation of interest risk, liquidity risk, etc.
Operational Risk Management System	Standardized Approach	May. 2006	Manage process and calculate CSA, KRI and OP VaR, etc.
BIS Capital Ratio Calculation/Credit Risk Measurement System	Fermat	Sep. 2006	Calculate equity, credit risk-weighted assets and credit risk, etc.
	RaY (*)	Dec. 2013	
Loan Loss Allowance Calculation System	IFRS	Jan. 2011	Incurred loss model
	IFRS 9	Mar. 2017	Expected loss model

(\*) To comply with the amended regulation relating to risk-weighted assets under Basel III, the upgrade of relevant systems was completed in March 2021.

***(vii) Response to Basel***

The Korean financial authorities have implemented Basel II since January 2008, and adopted the Standardized Approach and the Foundation Internal Ratings-Based Approach.

In conformity with the implementation roadmap of Basel II, the Group obtained the approval to use the Foundation Internal Ratings-Based Approach on credit risk from the FSS in July 2008 and has applied the approach since late June 2008. The Group applies the Standardized Approach on market risks and operational risks.

The Group completed the Basel III standard risk management system in preparation of the adoption of the Basel III regulations announced on December 1, 2013. Starting from 2013 year-end, the BIS capital adequacy ratio has been measured in accordance to the Basel III regulations.

Responding to the requirement of the financial authorities, the Group recognizes interest rate risk, liquidity risk, credit bias risk and reputational risk as well as Pillar I risks (credit risk, market risk and operational risk). Since 2015, the Group has responded to Pillar II regulations including additional capital requirements based on comprehensive assessment on bank risk management level. In addition, from the end of 2015, the Group has applied the uniform standards for the public announcement of financial business for Basel compliance.

The Group completed revised standards such as capital requirements for banks' investments in funds in 2017, capital requirements for securitization in 2018, and the Standardised Approach for measuring counterparty credit risk (SA-CCR) in 2019.

To comply with the amended regulation relating to risk-weighted assets under Basel III, the Group completed the consultation and the development of the relevant systems and the amended regulation has been applied since the calculation of the BIS ratio at the end of 2020.

The Group has completed IT consulting and system development related to Market Risk Regulation (Fundamental Review of the Trading Book, FRTB) and Operational Risk Regulation under Basel III during the second half of 2022, and plans to respond to the regulatory changes smoothly starting from 2023.

**53. Risk Management, Continued**

***(viii) Internal capital adequacy assessment process***

Internal capital adequacy assessment process is defined as the process that the Group aggregates significant risks, calculates its internal capital, compares the internal capital with the available capital and assesses its internal capital adequacy. The internal capital adequacy report including the assessment results at the end of the year is prepared and reported to the Risk Management Policy Committee.

- Internal capital adequacy assessment

For the internal capital adequacy assessment, the Group calculates its aggregated internal capital by evaluating all significant risks and available capital considering the quality and components of capital, and then assesses the internal capital adequacy by comparing the aggregated internal capital with the available capital.

In addition, the Group conducts periodic stress tests more than once every six months to assess potential weakness in crisis situations and uses its results to assess the internal capital adequacy. The Group assumes the macroeconomic situation as three stages of 'normal-pessimistic-serious' and is preparing countermeasures such as checking the adequacy of capital by each stage.

- Goal setting of internal capital management

The Group sets up and manages an internal capital limit on an annual basis, through the approval of the Risk Management Committee, to maintain internal capital adequacy by managing internal capital (integrated risks) within the extent of available capital.

The prior year's internal capital, analysis of domestic and foreign environment changes in the current year, and the direction and size of operations are all reflected in the goal setting of internal capital management to calculate the integrated internal capital scale. Moreover, Bank for International Settlements(BIS) capital adequacy ratio and risk appetite are taken into consideration in the goal setting of internal capital management.

- Allocation of internal capital

The Group's Risk Management Committee approves entire internal capital and the Risk Management Policy Committee allocates the capital to each segment and department, considering the extent of possible risk faced and size of operations. The allocated internal capital is monitored regularly and managed using various management methods. The results of monitoring and managing the allocated internal capital are reported to the Risk Management Committee. In case of any material changes in the Group's business plan or risk operation strategy, the Group adjusts the allocations elastically.

- Composition of internal capital

Internal capital comprises all the significant risks of the Group and is composed of quantifiable and non-quantifiable risks. Quantifiable risks are composed of credit risk, market risk, interest rate risk, operational risk and credit concentration risk, foreign currency settlement risk, and are risks measured quantitatively by applying reasonable methodology using objective data. Non-quantifiable risks are composed of strategy risk, reputation risk, residual risk on asset securitization and furthermore. Non-quantifiable risks are those risks that cannot be measured quantitatively because of lack of data or the absence of appropriate measuring methodologies.

**(2) Credit Risk**

***(i) Concept***

Credit risk can be defined as potential loss resulting from the refusal to perform obligations or default of counterparties. More generally, it is used to refer to the possibility of loss from engaged bonds that cannot be redeemed properly or from substitute payments.

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**53. Risk Management, Continued**

**(ii) Approach to credit risk management**

*Summary of credit risk management*

The Group regards credit risk as the most significant risk area in its business operations, and accordingly, closely monitors its credit risk exposure. The Group manages both credit risks at portfolio level and at individual credit level. At portfolio level, the Group reduces credit concentration and restructures the portfolio in such a way to maximize profitability considering the risk level. To avoid credit concentration on a particular sector, the Group manages credit limits by client, group, and industry. The Group also resets exposure management directives for each industry by conducting an industry credit evaluation twice a year.

At the individual credit level, the relationship manager (RM), the credit officer (CO) and the Credit Review Committee manage each borrower's credit risk.

*Post management and insolvent borrower management*

The Group monitors the borrower's credit rating from the date of the loan to the date of the final collection of debt consistently and inspects the borrower's status frequently to prevent the generation of new bad debts and to stabilize the number of debt recoveries.

In addition, an early warning system is operated to spot borrowers that are highly likely to be insolvent. The early warning system provides financial information, financial transaction information, public information and market information of the borrower, and such information is used by the RM and the CO to monitor and manage changes in the borrower's credit rating.

A borrower that is likely to be insolvent is classified as an early warning borrower, depending on the level of insolvency risk. The Group sets up a specific and applicable stabilization plan for such a borrower considering the borrower's characteristics. Furthermore, sub-standard borrowers are classified as insolvent borrowers, and are managed intensively by the Group, which takes legal proceedings, disposals or corporate turnaround measures if necessary.

*Classification of asset soundness and provision of allowance for loss*

Classification of asset soundness is fulfilled by the analysis and assessment of credit risk. The classification is used in order to provision an appropriate allowance, prevent further occurrences of insolvent assets and promote the normalization of existing insolvent assets to enhance the stabilization of asset operations.

Based on the Financial Supervisory Regulations of the Republic of Korea, the Group has established standards and guidelines on the classification of asset soundness, according to the Forward-Looking Criteria (FLC), which reflects not only the borrower's past records of repayment but also their future debt repayment capability.

In conformity with these standards, the Group classifies the soundness of its assets as "normal", "precautionary", "substandard", "doubtful", or "estimated loss" and differentiates the coverage ratio by the level of classification.

Details of loans by credit rating as of December 31, 2022 and 2021 are as follows:

< Corporate >

		December 31, 2022		
		12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired loans	Credit- impaired loans
	Carrying amounts			
AAA ~ BBB1	₩ 178,632,409	158,993,514	19,624,521	14,374
BBB2 ~ CCC	32,343,398	11,446,445	18,811,407	2,085,546
Below CC	1,145,876	59,332	59,528	1,027,016
	₩ 212,121,683	170,499,291	38,495,456	3,126,936

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53. Risk Management, Continued

December 31, 2021				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit-impaired loans	Credit-impaired loans
AAA ~ BBB1	₩ 145,246,104	129,624,321	15,607,391	14,392
BBB2 ~ CCC	34,873,228	13,309,599	19,879,966	1,683,663
Below CC	1,509,612	114,972	35,195	1,359,445
	₩ 181,628,944	143,048,892	35,522,552	3,057,500

< Non-corporate >

December 31, 2022				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit-impaired loans	Credit-impaired loans
Grade 1~ Grade 6	₩ 902,132	891,490	9,703	939
Grade 7~ Grade 8	1,114,611	1,110,595	3,915	101
Grade 9~ Grade 10	13,189	264	833	12,092
	₩ 2,029,932	2,002,349	14,451	13,132

December 31, 2021				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit-impaired loans	Credit-impaired loans
Grade 1~ Grade 6	₩ 851,665	832,543	17,233	1,889
Grade 7~ Grade 8	10,031	4,821	5,146	64
Grade 9~ Grade 10	16,653	182	1,529	14,942
	₩ 878,349	837,546	23,908	16,895

Details of payment guarantees (including financial guarantees) and unused commitments by credit rating as of December 31, 2022 and 2021 are as follows:

< Corporate >

December 31, 2022				
	Exposures	12-month expected credit loss	Lifetime expected credit losses	
			Non credit-impaired exposures	Credit-impaired exposures
Unused commitments:				
AAA ~ BBB1	₩ 42,037,907	38,248,653	3,789,254	-
BBB2 ~ CCC	2,823,624	1,272,304	1,499,090	52,230
Below CC	25,396	25,396	-	-
	₩ 44,886,927	39,546,353	5,288,344	52,230
Payment guarantees (including financial guarantees):				
AAA ~ BBB1	₩ 6,981,777	6,068,393	913,384	-
BBB2 ~ CCC	4,433,552	1,927,550	1,157,938	1,348,064
Below CC	6,225	-	154	6,071
	₩ 11,421,554	7,995,943	2,071,476	1,354,135

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**53. Risk Management, Continued**

<b>December 31, 2021</b>				
			Lifetime expected credit losses	
			Non credit-impaired exposures	Credit-impaired exposures
	Exposures	12-month expected credit loss		
Unused commitments:				
AAA ~ BBB1	₩ 36,900,089	34,446,238	2,453,851	-
BBB2 ~ CCC	5,262,853	3,472,941	1,736,397	53,515
Below CC	2	2	-	-
	₩ 42,162,944	37,919,181	4,190,248	53,515
Payment guarantees (including financial guarantees):				
AAA ~ BBB1	₩ 7,586,234	6,890,331	695,903	-
BBB2 ~ CCC	3,620,260	1,610,162	1,487,244	522,854
Below CC	9,028	158	-	8,870
	₩ 11,215,522	8,500,651	2,183,147	531,724
< Non-corporate >				
<b>December 31, 2022</b>				
			Lifetime expected credit losses	
			Non credit-impaired exposures	Credit-impaired exposures
	Exposures	12-month expected credit loss		
Unused commitments:				
Grade 1~ Grade 6	₩ 60,224	59,773	451	-
Grade 7~ Grade 8	20	-	20	-
Grade 9~ Grade 10	13	13	-	-
	₩ 60,257	59,786	471	-
<b>December 31, 2021</b>				
			Lifetime expected credit losses	
			Non credit-impaired exposures	Credit-impaired exposures
	Exposures	12-month expected credit loss		
Unused commitments:				
Grade 1~ Grade 6	₩ 103,445	102,947	498	-
Grade 7~ Grade 8	9	-	9	-
Grade 9~ Grade 10	17	17	-	-
	₩ 103,471	102,964	507	-

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**53. Risk Management, Continued**

***(iii) Measurement methodology of credit risk***

Pursuant to Basel III, the Group selects the measurement methodology of credit risk considering the complexity of measurement, measurement factors, estimating methods and others. Measurement approaches are divided into Standardized Approach and Internal Ratings-Based Approach.

*Standardized Approach (SA)*

In the case of the Standardized Approach, the risk weights are applied according to the credit rating assessed by External Credit Assessment Institution (ECAI). Risk weights in each credit rating are as follows:

Credit rating	Corporate	Country	Bank
AAA ~ AA-	20.0%	0.0%	20.0%
A+ ~ A-	50.0%	20.0%	30.0%
BBB+ ~ BBB-	75.0%	50.0%	50.0%
BB+ ~ BB-	100.0%	100.0%	100.0%
B+ ~ B-	150.0%	100.0%	100.0%
Below B-	150.0%	150.0%	150.0%
Unrated	100.0% (*)	100.0%	Rating based on due diligence

(\*) In case of small and medium-sized business, 85.0% is applied.

The OECD is designated as foreign ECAI and Korea Investors Service Co., Ltd., NICE Investors Services Co., Ltd. and the Korea Ratings Co., Ltd. are designated as domestic ECAI.

The Group applies the credit rating based on the corresponding loan and same borrower's unsecured senior loans. In the case the borrower's risk weight is higher than the unrated exposure's risk weight (100%), the higher weight is applied. In the case the borrower has more than one rating, the higher weight of the two lowest weights (Second Best Criteria) is applied.

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**53. Risk Management, Continued**

*Internal Ratings-Based Approach (IRB)*

To use the Internal Ratings-Based Approach, a bank must be approved by the FSS and should also meet the requirement pre-set by the FSS.

In relation to Basel II that has been adopted domestically as of January 2008, the Group gained approval from the FSS to use the Foundation Internal Ratings-Based Approach in July 2008. The Group has calculated credit risk-weighted assets using the approach since late June 2008.

*Measurement method of credit risk-weighted asset*

The Group calculates credit risk-weighted assets of corporate exposures and asset securitization exposures using the Foundation Internal Ratings-Based Approach as of December 31, 2022.

The Standardized Approach is applied to country exposures, public institution exposures and bank exposures permanently and applied to overseas subsidiary and the Bank's branch pursuant to prior consultation with the FSS.

<Approved measurement method>

Measurement method		Exposure
Standardized Approach	Permanent SA	- Countries, public institutions, banks and equity
	SA	- Overseas subsidiaries and branches, and other assets, retail, residential mortgage, commercial properties
Foundation Internal Ratings-Based Approach		- Corporate, small and medium enterprises and asset securitization (at each credit level)
Application of IRB by phase		- Special lending, non-residence and others

The mitigated effect of credit risks reflects the related policies which consider eligible collateral and guarantees. The Group calculates the credit risk-weighted assets using the capital adequacy ratio.

Upon the calculation of credit risk-weighted assets for derivatives, the Group takes into consideration the set-off effects of transactions under legally enforceable rights to set-off to calculate exposures.

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**53. Risk Management, Continued**

*Credit rating model*

The results of credit rating are presented as grades through an assessment of the debt repayment capacity that the principal and interest of debt securities or loans are redeemed while complying with contractual redemption schedule.

Using the Group's internal credit rating model, the Group classifies debtors' credit rating into 14 grades (AAA~D). To distinguish the difference between credits in the same grade, the Group uses 20 stages as auxiliaries to 14 grades.

The Group's regular credit rating process is carried out once a year and in the case of the change of debtor's credit condition, the credit rating is frequently adjusted as necessary to retain the adequacy of credit rating.

The results of credit rating are applied to various areas such as discrimination of loan processes, loan limit, loan interest rate, post loan management standard process, credit risk measurement, and allowance for loan losses assessment.

*Credit rating process control structure*

According to the Principle of Checks and Balances, the Group has established the credit rating process control structure by which the credit rating system operates appropriately.

- Independent assessment of credit rating: The Bank's business segment (RM) and credit rating assessment segment (SRO) are independently operated.
- Independent control of credit rating system: The control of credit rating system including the development of credit rating model is independently implemented by the Bank's Risk Management Department.
- Independent verification of credit rating system: Credit rating system is independently verified by Risk Validation Team of the Financial Planning Department.
- Internal audit of credit rating process: Credit rating process is audited by the Bank's internal audit department.
- Role of the Board of Directors and the Bank's management: Major issues relating to credit rating process are approved by the Board of Directors and are regularly monitored by the Bank's top management.

The Group reviews debt serviceability based on a credit analysis when handling loans. Depending on the results, credit loan preservation is adjusted as necessary using such methods as interest rate preservation due to credit risk.

The Group evaluates the value of the collateral, performing ability and legal validity of the guarantee at the initial acquisition. The Group re-evaluates the provided collateral and guarantees regularly for them to be reasonably preserved.

For guarantees, the Group demands a corresponding written guarantee according to loan handling standards and the guarantor's credit rating is independently calculated when in conformance with the credit rating endowment method.

The quantification of the extent to which collateral and other credit enhancements mitigate credit risk of impaired financial assets as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Securities measured at FVTPL	₩ 268	1,254
Securities measured at FVOCI	72,739	71,668
Loans measured at amortized cost	3,109,764	3,098,440
Other assets	14,221	15,493

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53. **Risk Management, Continued**

(iv) *Credit exposure*

Geographical information of credit exposure as of December 31, 2022 and 2021 are as follows:

	December 31, 2022									
	Korea	Hong Kong	Ireland	Uzbekistan	Brazil	Hungary	UK	US	Others	Total
Due from banks (excluding due from BOK)	₩ 2,087,746	92,873	144	3,183	1	225,639	547,703	3,340,017	1,238,801	7,536,107
Securities measured at FVOCI:										
Bonds (excluding government bonds)	17,178,625	344,049	25,095	-	-	135,325	366,557	5,170,151	3,045,917	26,265,719
Securities measured at amortized cost:										
Bonds (excluding government bonds)	3,769,472	-	-	-	39,676	-	-	-	42,779	3,851,927
Loans	172,479,352	2,997,928	801,457	912,348	168,821	1,097,670	1,602,886	5,800,712	46,100,079	231,961,253
Derivative financial assets	145,811	3,572	-	-	156	54	8,681	18,656	47,800	224,730
Other financial assets	4,962,827	7,013	394	1,705	18,400	11,723	24,254	2,433	6,534,690	11,563,439
	200,623,833	3,445,435	827,090	917,236	227,054	1,470,411	2,550,081	14,331,969	57,010,066	281,403,175
Guarantees	10,880,998	-	-	53,518	-	54,564	312	241,660	190,502	11,421,554
Commitments	39,417,548	279,222	110,971	25,475	126,730	22,529	422,246	2,422,676	2,119,787	44,947,184
	50,298,546	279,222	110,971	78,993	126,730	77,093	422,558	2,664,336	2,310,289	56,368,738
₩	250,922,379	3,724,657	938,061	996,229	353,784	1,547,504	2,972,639	16,996,305	59,320,355	337,771,913

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**53. Risk Management, Continued**

	December 31, 2021									
	Korea	Hong Kong	Ireland	Uzbekistan	Brazil	Hungary	UK	US	Others	Total
Due from banks (excluding due from BOK) ₩	986,888	87,706	658	19,383	2	204,510	113,337	2,933,625	913,069	5,259,178
Securities measured at FVOCI: Bonds (excluding government bonds)	8,365,200	435,529	40,057	-	627	69,724	350,644	3,903,883	2,634,803	15,800,467
Securities measured at amortized cost: Bonds (excluding government bonds)	3,196,288	-	-	-	22,189	-	-	-	16,504	3,234,981
Loans	139,966,901	2,106,550	398,486	708,402	130,688	677,906	1,045,014	2,442,512	29,963,677	177,440,136
Derivative financial assets	174,859	45,847	-	-	166	2,878	3,922	80,543	223,656	531,871
Other financial assets	7,678,538	3,079	323	1,689	225	8,839	11,776	645	219,020	7,924,134
	160,368,674	2,678,711	439,524	729,474	153,897	963,857	1,524,693	9,361,208	33,970,729	210,190,767
Guarantees	10,488,411	-	-	37,883	-	51,599	-	347,919	289,710	11,215,522
Commitments	35,122,646	138,107	148,185	33,042	-	51,285	775,645	979,541	5,017,964	42,266,415
	45,611,057	138,107	148,185	70,925	-	102,884	775,645	1,327,460	5,307,674	53,481,937
₩	205,979,731	2,816,818	587,709	800,399	153,897	1,066,741	2,300,338	10,688,668	39,278,403	263,672,704

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**53. Risk Management, Continued**

Industry information of credit exposure as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>			
	Manufacturing	Service	Others	Total
Due from banks (excluding due from BOK)	₩ 12,373	6,621,518	902,216	7,536,107
Securities measured at FVOCI:				
Bonds (excluding government bonds)	3,707,485	18,214,945	4,343,289	26,265,719
Securities measured at amortized cost:				
Bonds (excluding government bonds)	2,464	923,664	2,925,799	3,851,927
Loans	86,302,780	120,393,062	25,265,411	231,961,253
Derivative financial assets	-	223,505	1,225	224,730
Other financial assets	276,553	1,954,268	9,332,618	11,563,439
	90,301,655	148,330,962	42,770,558	281,403,175
Guarantees	8,904,746	2,116,966	399,842	11,421,554
Commitments	20,578,500	23,527,141	841,543	44,947,184
	29,483,246	25,644,107	1,241,385	56,368,738
	₩ 119,784,901	173,975,069	44,011,943	337,771,913

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**53. Risk Management, Continued**

	<b>December 31, 2021</b>			
	<b>Manufacturing</b>	<b>Service</b>	<b>Others</b>	<b>Total</b>
Due from banks (excluding due from BOK)	₩ 3,681	4,186,636	1,068,861	5,259,178
Securities measured at FVOCI:				
Bonds (excluding government bonds)	2,693,912	9,913,375	3,193,180	15,800,467
Securities measured at amortized cost:				
Bonds (excluding government bonds)	18,645	45,357	3,170,979	3,234,981
Loans	74,648,047	83,700,172	19,091,917	177,440,136
Derivative financial assets	-	531,871	-	531,871
Other financial assets	195,335	278,983	7,449,816	7,924,134
	<u>77,559,620</u>	<u>98,656,394</u>	<u>33,974,753</u>	<u>210,190,767</u>
Guarantees	7,318,154	3,050,808	846,560	11,215,522
Commitments	19,661,928	21,124,029	1,480,458	42,266,415
	<u>26,980,082</u>	<u>24,174,837</u>	<u>2,327,018</u>	<u>53,481,937</u>
	<u>₩ 104,539,702</u>	<u>122,831,231</u>	<u>36,301,771</u>	<u>263,672,704</u>

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53. **Risk Management, Continued**

The detail of credit exposures by industry affected by the pandemic of COVID-19 as of December 31, 2022 and 2021 are as follows and the exposures by industries could be changed according to economic fluctuations.

December 31, 2022											
		Due from banks (excluding due from BOK)	Securities measured at FVOCI Bonds (excluding government bonds)	Loans	Derivative financial assets	Other assets	Subtotal	Guarantees	Commit- ments	Subtotal	Total
Manufacturing:											
Display	₩	-	-	1,289,473	-	5,100	1,294,573	382	33,564	33,946	1,328,519
Semiconductor		-	226,042	4,267,310	-	16,770	4,510,122	152,023	1,564,613	1,716,636	6,226,758
/Mobile phone		-	325,472	12,191,177	-	29,695	12,546,344	580,123	1,716,017	2,296,140	14,842,484
Automotive		-	1,077,431	18,430,754	-	60,552	19,568,737	201,296	6,409,868	6,611,164	26,179,901
Refinery/Chemical		-	182,739	10,022,074	-	22,002	10,226,815	650,497	2,873,421	3,523,918	13,750,733
/Energy		-	1,830,777	38,497,346	-	109,924	40,438,047	12,659,944	9,556,061	22,216,005	62,654,052
Steel/Metal		-	1,830,777	38,497,346	-	109,924	40,438,047	12,659,944	9,556,061	22,216,005	62,654,052
Others		-	3,642,461	84,698,134	-	244,043	88,584,638	14,244,265	22,153,544	36,397,809	124,982,447
Service:											
Air transportation		-	5,624	3,085,579	-	13,785	3,104,988	221,159	3,000	224,159	3,329,147
Sea transportation		-	-	2,493,475	-	31,018	2,524,493	78,278	374,025	452,303	2,976,796
Other		-	166,659	8,724,268	-	23,326	8,914,253	16,597	2,583,356	2,599,953	11,514,206
transportation		-	-	12,277	-	59	12,336	-	1,700	1,700	14,036
Leisure/Travel		-	11,589	2,043,522	-	4,873	2,059,984	39,249	347,915	387,164	2,447,148
industry		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
Food/Accommoda		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
-tion		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
Automotive-		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
related		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
Finance/Insurance		7,636,352	14,248,178	100,615,399	185,477	393,798	123,079,204	1,708,272	20,055,125	21,763,397	144,842,601
and others		7,636,352	14,432,050	117,538,177	185,477	468,531	140,260,587	2,070,682	23,477,561	25,548,243	165,808,830
Other:											
Construction		-	285,970	4,067,049	-	8,889	4,361,908	348,557	1,561,312	1,909,869	6,271,777
Others		606,556	3,483,303	15,111,240	-	7,071,110	26,272,209	43,757	13,556	57,313	26,329,522
		606,556	3,769,273	19,178,289	-	7,079,999	30,634,117	392,314	1,574,868	1,967,182	32,601,299
₩		8,242,908	21,843,784	221,414,600	185,477	7,792,573	259,479,342	16,707,261	47,205,973	63,913,234	323,392,576

Responding to the COVID-19 pandemic, the Bank recalculates the forward-looking information and recognises additional allowance for loan losses and provisions amounting to ₩220,618 million for the year ended December 31, 2022.

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53. **Risk Management, Continued**

December 31, 2021										
	Due from banks (excluding due from BOK)	Securities measured at FVOCI Bonds (excluding government bonds)	Loans	Derivative financial assets	Other assets	Subtotal	Guarantees	Commit- ments	Subtotal	Total
Manufacturing:										
Display	₩ -	-	730,259	-	2,917	733,176	1,641	267,574	269,215	1,002,391
Semiconductor										
/Mobile phone	-	204,679	5,059,874	-	7,958	5,272,511	115,211	365,071	480,282	5,752,793
Automotive	-	231,343	10,721,833	-	15,286	10,968,462	435,597	1,685,997	2,121,594	13,090,056
Refinery/Chemical										
/Energy	-	620,186	13,875,360	-	27,904	14,523,450	150,371	5,520,913	5,671,284	20,194,734
Steel/Metal	-	146,239	9,985,811	-	13,814	10,145,864	617,066	2,343,478	2,960,544	13,106,408
Others	-	1,395,470	32,703,381	-	53,372	34,152,223	9,268,619	11,055,744	20,324,363	54,476,586
	-	2,597,917	73,076,518	-	121,251	75,795,686	10,588,505	21,238,777	31,827,282	107,622,968
Service:										
Air transportation	-	5,844	3,200,683	-	9,284	3,215,811	291,880	21,000	312,880	3,528,691
Sea transportation	-	-	2,083,099	-	21,353	2,104,452	74,721	751,613	826,334	2,930,786
Other										
transportation	-	140,164	6,261,103	-	12,895	6,414,162	9,110	3,576,532	3,585,642	9,999,804
Leisure/Travel										
industry	-	-	59,072	-	66	59,138	-	1,700	1,700	60,838
Food/Accommoda- -tion	-	72,427	1,990,730	-	3,651	2,066,808	36,674	318,921	355,595	2,422,403
Automotive- related	-	-	513,522	-	876	514,398	12,322	84,891	97,213	611,611
Finance/Insurance and others	5,529,904	9,395,925	68,744,507	528,827	179,047	84,378,210	2,588,124	17,408,058	19,996,182	104,374,392
	5,529,904	9,614,360	82,852,716	528,827	227,172	98,752,979	3,012,831	22,162,715	25,175,546	123,928,525
Other:										
Construction	-	236,235	2,640,398	-	3,628	2,880,261	195,956	1,640,764	1,836,720	4,716,981
Others	655,841	2,411,285	12,062,217	-	5,572,707	20,702,050	155,971	1,548,876	1,704,847	22,406,897
	655,841	2,647,520	14,702,615	-	5,576,335	23,582,311	351,927	3,189,640	3,541,567	27,123,878
₩	6,185,745	14,859,797	170,631,849	528,827	5,924,758	198,130,976	13,953,263	46,591,132	60,544,395	258,675,371

Responding to the COVID-19 pandemic, the Bank recalculates the forward-looking information and recognises additional allowance for loan losses and provisions amounting to ₩924,176 million for the year ended December 31, 2021.

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**53. Risk Management, Continued**

Credit exposures of debt securities by credit rating as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 39,624,719	39,280,297	344,422	-
BBB2 ~ CCC	385,256	362,821	22,435	-
Below CC	37,354	37,354	-	-
	₩ <u>40,047,329</u>	<u>39,680,472</u>	<u>366,857</u>	<u>-</u>

<b>December 31, 2021</b>				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 26,072,019	25,742,390	329,629	-
BBB2 ~ CCC	322,173	322,173	-	-
Below CC	-	-	-	-
	₩ <u>26,394,192</u>	<u>26,064,563</u>	<u>329,629</u>	<u>-</u>

**53. Risk Management, Continued**

**(3) Capital management activities**

**(i) *Capital adequacy***

The FSS approved the Group's use of the Foundation Internal Ratings-Based Approach in July 2008. The Group has been using the same approach when calculating credit risk-weighted assets since the end of June 2008. The equity capital ratio and equity capital according to the standards of the Bank for International Settlements are calculated for such disclosure. The equity capital ratio and equity capital are calculated on a consolidated basis. In conformity with the Banking Act, which is based on the implementation of Basel III on December 2013, the regulatory capital is divided into the following two categories.

*Tier 1 capital (Common Equity Tier 1 + Additional Tier 1 capital)*

- Common Equity Tier 1

Regulatory capital that represents the most subordinated claim in liquidation of the Group, takes the first and proportionately greatest share of any losses as they occur, and which principal is never repaid outside of liquidation meets the criteria for classification as common equity, including capital stock, capital surplus, retained earnings, and accumulated other comprehensive income as common equity Tier 1.

- Additional Tier 1 capital

Capital stock and capital surplus related to issuance of capital securities that are subordinated, have non-cumulative and conditional dividends or interests, and have no maturity or step-up conditions.

*Tier 2 capital (Supplementary Tier 2 capital)*

Regulatory capital that fulfils supplementary capital adequacy requirements, and includes subordinated debt with maturities over 5 years and allowance for loan losses in conformity with external regulatory standards and internal standards.

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**53. Risk Management, Continued**

The BIS capital adequacy ratio and capital in accordance to Basel III standards as of December 31, 2022 and 2021 are as follows:

*BIS capital adequacy ratio*

	December 31, 2022	December 31, 2021
Equity capital based on BIS (A):		
Tier 1 capital:		
Common Equity Tier 1	₩ 35,125,348	41,131,484
Additional Tier 1 capital	-	-
	35,125,348	41,131,484
Tier 2 capital	₩ 3,197,936	3,454,548
	₩ 38,323,284	44,586,032
Risk-weighted assets (B):		
Credit risk-weighted assets	₩ 277,265,026	291,238,386
Market risk-weighted assets	1,329,603	1,692,127
Operational risk-weighted assets	7,458,674	6,750,345
	₩ 286,053,303	299,680,858
BIS capital adequacy ratio (A/B):	13.40%	14.88%
Tier 1 capital ratio:	12.28%	13.73%
Common Equity Tier 1 ratio	12.28%	13.73%
Additional Tier 1 capital ratio	-	-
Tier 2 capital ratio	1.12%	1.15%

*Equity capital based on BIS*

	December 31, 2022	December 31, 2021
Tier 1 capital (A=C+D):		
Common Equity Tier 1 (C)		
Capital stock	₩ 23,151,559	21,886,559
Capital surplus	748,121	738,802
Retained earnings	7,355,027	14,226,652
Non-controlling interests	-	-
Accumulated other comprehensive income	4,185,537	5,289,110
Common stock deductibles	(314,896)	(1,009,639)
	35,125,348	41,131,484
Additional Tier 1 capital (D)		
Non-controlling interests	-	-
	35,125,348	41,131,484
Tier 2 capital (B):		
Allowance for doubtful accounts, etc.	972,578	924,935
Qualified capital securities	2,244,000	2,312,000
Non-qualified capital securities	-	258,060
Non-controlling interests	-	-
Additional stock deductibles	(18,642)	(40,447)
	3,197,936	3,454,548
Equity capital (A+B)	₩ 38,323,284	44,586,032

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**53. Risk Management, Continued**

**(4) Market risk**

**(i) Concept**

Market risk is defined as the possibility of potential loss resulting from fluctuations in interest rates, foreign exchange rates and the price of stocks and commodities. Trading position is exposed to risks, such as interest rate, stock price, and foreign exchange rate, etc. Non-trading position is mostly exposed to interest rates. Accordingly, the Group classifies market risks into those exposed from trading position or those exposed from non-trading position.

**(ii) Market risks of trading positions**

*Management method on market risks arising from trading positions*

In estimating market risk, the Standardized Approach and the internal model are used. The Standardized Approach is used to calculate the required capital from market risk and the internal model is used to manage risks internally. Since July 2007, the Group has measured one-day VaR through the historical simulation method using the time series data of past 250 days under a 99% confidence level. The calculated VaR is monitored daily.

The Group sets total limit of market risk based on annual business plan, risk appetite and others and monitors VaR limit of each department on a daily basis.

**Capital Requirements for Market risk**

The Group's Capital Requirements for Market risk as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Interest rate	₩ 73,860	94,917
Stock price	148	27
Foreign exchange rate	21,112	20,164
Option	11,248	20,262
Total	₩ 106,368	135,370

**(iii) Market risks of non-trading positions**

*Management method on market risks arising from non-trading positions*

The most critical market risk that arises in non-trading position is the interest rate risk. Interest rate risk is defined as the likely loss resulting from the unfavorable fluctuation of interest rate in the Group's financial condition and is measured by IRRBB (Interest Rate Risk in Banking Book),  $\Delta$ EVE (change in Economic Value of Equity) and  $\Delta$ NII (change in Net Interest Income).

$\Delta$ EVE represents fluctuations in the economic value of equity capital that may occur due to changes in interest rates affecting the present values of assets, liabilities and off-balance sheet items.  $\Delta$ NII represents changes in net interest income that may occur over a certain period of time (e.g. one year) in the future due to changes in interest rates.

The Group's Risk Management Committee sets and manages interest rate risk limits on a yearly basis and interest rate risk is monthly measured and monitored.

$\Delta$ EVE and  $\Delta$ NII of the Group's non-trading positions as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
$\Delta$ EVE	₩ 1,344,581	700,092
$\Delta$ NII	355,645	181,243

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**53. Risk Management, Continued**

**(iv) Foreign currency risk**

Outstanding balances by currency with significant exposure as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>					
	USD	EUR	JPY	GBP	Others	Total
Financial assets:						
Cash and due from banks ₩	6,240,654	68,209	52,243	15,169	609,085	6,985,360
Securities measured at FVTPL	1,237,226	96,881	2,218	13,654	60,168	1,410,147
Securities measured at FVOCI	9,631,280	287,606	376,526	-	1,452,085	11,747,497
Securities measured at amortized cost	766,561	185,114	-	-	40,135	991,810
Loans	54,647,365	4,252,704	1,698,597	1,069,062	2,841,923	64,509,651
Derivative financial assets	2,778,263	69,802	22,321	175,821	64,288	3,110,495
Other financial assets	2,428,719	55,005	51,078	16,876	70,121	2,621,799
	<u>77,730,068</u>	<u>5,015,321</u>	<u>2,202,983</u>	<u>1,290,582</u>	<u>5,137,805</u>	<u>91,376,759</u>
Financial liabilities:						
Financial liabilities designated at FVTPL	180,007	-	-	-	-	180,007
Deposits	13,944,916	462,440	464,052	1,091	565,360	15,437,859
Borrowings	20,282,874	359,462	1,101,061	15,240	1,487,583	23,246,220
Debentures	27,684,924	2,752,363	209,550	97,197	7,398,273	38,142,307
Derivative financial liabilities	3,181,849	122,539	8,662	218,257	76,772	3,608,079
Other financial liabilities	2,211,964	36,898	31,422	16,993	230,500	2,527,777
	<u>67,486,534</u>	<u>3,733,702</u>	<u>1,814,747</u>	<u>348,778</u>	<u>9,758,488</u>	<u>83,142,249</u>
Net financial position ₩	<u>10,243,534</u>	<u>1,281,619</u>	<u>388,236</u>	<u>941,804</u>	<u>(4,620,683)</u>	<u>8,234,510</u>

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
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**53. Risk Management, Continued**

	<b>December 31, 2021</b>					
	USD	EUR	JPY	GBP	Others	Total
Financial assets:						
Cash and due from banks ₩	4,642,754	64,208	52,635	17,748	588,217	5,365,562
Securities measured at FVTPL	827,055	-	1,101	-	98,832	926,988
Securities measured at FVOCI	7,509,649	25	311,837	-	670,443	8,491,954
Securities measured at amortized cost	48,513	-	-	-	22,544	71,057
Loans	43,467,636	3,731,252	1,474,839	798,920	2,596,369	52,069,016
Derivative financial assets	1,157,191	2,562	2,460	30,772	30,871	1,223,856
Other financial assets	1,884,015	292,338	25,873	8,015	51,246	2,261,487
	<u>59,536,813</u>	<u>4,090,385</u>	<u>1,868,745</u>	<u>855,455</u>	<u>4,058,522</u>	<u>70,409,920</u>
Financial liabilities:						
Financial liabilities designated at FVTPL	255,902	-	-	-	-	255,902
Deposits	12,185,398	312,629	344,342	972	422,393	13,265,734
Borrowings	16,982,298	349,623	1,037,802	9,600	761,525	19,140,848
Debentures	26,634,144	1,704,147	290,391	791,815	6,531,337	35,951,834
Derivative financial liabilities	733,250	4,569	4,297	16,166	20,835	779,117
Other financial liabilities	2,224,048	13,869	18,401	1,119	152,720	2,410,157
	<u>59,015,040</u>	<u>2,384,837</u>	<u>1,695,233</u>	<u>819,672</u>	<u>7,888,810</u>	<u>71,803,592</u>
Net financial position ₩	<u>521,773</u>	<u>1,705,548</u>	<u>173,512</u>	<u>35,783</u>	<u>(3,830,288)</u>	<u>(1,393,672)</u>

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
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53. **Risk Management, Continued**

(v) *Interest rate risk management*

The Group is closely monitoring the outputs prepared by the industrial working groups which is managing the transition to alternative benchmark rates and the markets related the rates. The outputs include the information published by regulatory authorities related to IBORs. The authorities have made it clear that after the end of 2021, they will no longer persuade or force banks to submit IBORs. Responding the transition, the Group organized a task force led by the head of the risk management division and the task force has established the LIBOR transition plan that consists of workflows such as alternative interest rate determination, application development, customer communication management, risk management, taxation, finance, legal, and accounting system establishment. The important progress of the plan is reported to the management and may also be reported to the board of directors if necessary. The purpose of the task force is to review where exposure to IBOR occurs within the Group's business, and to develop and implement the plan to transit to the alternative benchmark rates. As of December 31, 2021, the Group has completed the transition and the application of the alternative benchmark rates and plans to complete the transition to the alternative benchmark rates before June 2023 for existing contracts contracted in USD with a contract maturity after June 2023.

The financial instruments that have yet to transition to alternative benchmark rates as of December 31, 2022 and 2021 are as follows. The amounts of the non-derivative financial instruments are the carrying amounts and the amounts of the derivatives, the commitments and the guarantees are the nominal amounts.

		December 31, 2022		
		USD	Others	Total
Non-derivative financial assets:				
Financial assets measured at FVOCI	₩	6,342	-	6,342
Financial assets measured at amortized cost		13,724,781	935,582	14,660,363
Privately placed corporate bonds		-	45,153	45,153
		13,731,123	980,735	14,711,858
Non-derivative financial liabilities:				
Financial liabilities measured at amortized cost		781,924	150,000	931,924
Derivative:				
Trading purpose				
Interest rate		76,158,628	-	76,158,628
Currency		42,670,815	-	42,670,815
Hedging purpose				
Interest rate		16,209,017	-	16,209,017
Currency		5,025,604	-	5,025,604
		140,064,064	-	140,064,064
Commitments and guarantees	₩	75,022	-	75,022

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
**December 31, 2022 and 2021**  
(In millions of won)

**53. Risk Management, Continued**

		<b>December 31, 2021</b>				
		<u>USD</u>	<u>EUR</u>	<u>GBP</u>	<u>Others</u>	<u>Total</u>
Non-derivative financial assets:						
Financial assets measured at FVOCI	₩	109,601	-	-	-	109,601
Financial assets measured at amortized cost		13,865,453	117,123	383,002	437,635	14,803,213
Privately placed corporate bonds		-	-	-	48,771	48,771
		<u>13,975,054</u>	<u>117,123</u>	<u>383,002</u>	<u>486,406</u>	<u>14,961,585</u>
Non-derivative financial liabilities:						
Financial liabilities measured at amortized cost		<u>707,744</u>	<u>-</u>	<u>-</u>	<u>30,000</u>	<u>737,744</u>
Derivative:						
Trading purpose						
Interest rate		60,032,707	-	71,024	-	60,103,731
Currency		41,685,284	-	-	-	41,685,284
Hedging purpose						
Interest rate		15,078,608	-	-	-	15,078,608
Currency		4,701,218	-	-	-	4,701,218
		<u>121,497,817</u>	<u>-</u>	<u>71,024</u>	<u>-</u>	<u>121,568,841</u>
Commitments and guarantees	₩	<u>1,819,774</u>	<u>-</u>	<u>25,620</u>	<u>-</u>	<u>1,845,394</u>

**53. Risk Management, Continued**

**(5) Liquidity risk management**

*(i) Concept*

Liquidity risk is defined as the possibility of potential loss due to a temporary shortage in funds caused by a maturity mismatch or an unexpected capital outlay. Liquidity risk soars when funding rates rise, assets are sold below a normal price, or a good investment opportunity is missed.

*(ii) Approach to liquidity risk management*

The Group manages its liquidity risks as follows:

*Allowable limit for liquidity risk*

- The allowable limit for liquidity risk sets LCR, NSFR and Mid- to long-term foreign currency fund management ratio
- The management standards with regards to the allowable limit for liquidity risk should be set using separate and stringent set ratios in accordance with the FSS guidelines.

*<Measurement Methodology>*

- LCR:  $(\text{High quality liquid assets} / \text{Total net cash outflows over the next 30 calendar days}) \times 100$
- NSFR:  $\text{Available Stable Funding} / \text{Required Stable Funding} \times 100$
- Mid- to long-term foreign currency fund management ratio:  $\text{Foreign currency funding being repaid after 1 year} / \text{Foreign currency lending being collected after 1 year} \times 100$

*Early warning indicator*

In order to identify prematurely and cope with worsening liquidity risk trends, the Group has set up 16 indexes such as the “Foreign Exchange Stabilization Bond CDS Premium,” and measures the trend monthly, weekly and daily as a means for establishing the allowable liquidity risk limit complementary measures.

*Stress-Test analysis and contingency plan*

- The Group evaluates the effects on the liquidity risk and identifies the inherent flaws. In the case where an unpredictable and significant liquidity crisis occurs, the Group executes risk situation analysis quarterly based on crisis specific to the Group, market risk and complex emergency, and reports to the Risk Management Committee for the purpose of the Group’s solvency securitization.
- The Group established detailed contingency plan to manage the liquidity risks at every risk situations.

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
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53. **Risk Management, Continued**

***(iii) Analysis on remaining contractual maturity of financial instruments***

Remaining contractual maturity analysis for non-derivative financial instruments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>					
		Within 1 month	1~3 months	3~12 months	1~5 Years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	10,585,855	653,607	1,111,496	936,053	33	13,287,044
Securities measured at FVTPL		2,271,567	129,876	365,188	3,767,596	13,984,207	20,518,434
Securities measured at FVOCI		191,002	1,370,709	4,843,649	15,932,002	20,520,154	42,857,516
Securities measured at amortized cost		249,997	534,893	2,980,984	5,515,048	895,390	10,176,312
Loans		15,235,854	22,995,656	71,078,960	86,909,565	18,290,212	214,510,247
Other financial assets		6,592,424	66,022	64,076	148,851	1,642,050	8,513,423
	₩	<u>35,126,699</u>	<u>25,750,763</u>	<u>80,444,353</u>	<u>113,209,115</u>	<u>55,332,046</u>	<u>309,862,976</u>
Financial liabilities:							
Financial liabilities designated at FVTPL	₩	60,946	123,270	388,313	290,403	88,371	951,303
Deposits		30,947,918	13,079,140	21,342,095	5,248,876	511,107	71,129,136
Borrowings		3,644,481	7,054,362	13,762,492	4,988,536	995,319	30,445,190
Debentures		5,063,003	11,958,019	56,583,088	86,690,246	4,589,279	164,883,635
Other financial liabilities		4,109,690	2,147,134	84,784	1,574,493	997,768	8,913,869
	₩	<u>43,826,038</u>	<u>34,361,925</u>	<u>92,160,772</u>	<u>98,792,554</u>	<u>7,181,844</u>	<u>276,323,133</u>
		<b>December 31, 2021</b>					
		Within 1 month	1~3 months	3~12 months	1~5 Years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	10,675,868	821,136	556,908	1,029,932	6	13,083,850
Securities measured at FVTPL		888,146	44,825	1,124,769	2,843,518	8,083,770	12,985,028
Securities measured at FVOCI		405,305	1,485,286	4,269,519	11,558,567	15,120,443	32,839,120
Securities measured at amortized cost		10,000	342,645	1,433,943	4,370,661	37,900	6,195,149
Loans		10,569,371	14,952,649	64,409,196	74,652,720	16,280,055	180,863,991
Other financial assets		5,286,452	35,033	42,566	94,468	809,859	6,268,378
	₩	<u>27,835,142</u>	<u>17,681,574</u>	<u>71,836,901</u>	<u>94,549,866</u>	<u>40,332,033</u>	<u>252,235,516</u>
Financial liabilities:							
Financial liabilities designated at FVTPL	₩	8,854	125,618	682,882	348,104	214,802	1,380,260
Deposits		26,009,526	8,199,725	17,001,758	3,139,514	526,148	54,876,671
Borrowings		3,167,649	5,502,750	13,839,316	3,786,868	1,075,726	27,372,309
Debentures		4,899,919	11,927,892	48,235,329	79,124,189	6,148,738	150,336,067
Other financial liabilities		5,110,000	1,589,201	70,881	341,262	539,254	7,650,598
	₩	<u>39,195,948</u>	<u>27,345,186</u>	<u>79,830,166</u>	<u>86,739,937</u>	<u>8,504,668</u>	<u>241,615,905</u>

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
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**53. Risk Management, Continued**

Remaining contractual maturity analysis for derivative financial instruments as of December 31, 2022 and 2021 are as follows:

*Net settlement of derivative financial instruments*

		<b>December 31, 2022</b>					
		<u>Within 1 month</u>	<u>1~3 months</u>	<u>3~12 months</u>	<u>1~5 Years</u>	<u>Over 5 years</u>	<u>Total</u>
Trading purpose derivatives:							
Currency	₩	15,373	6,555	217	-	-	22,145
Interest rate		14,379	56,438	122,389	(239,828)	329,021	282,399
Stock		1	-	-	-	-	1
Hedging purpose derivatives:							
Interest rate		(43,682)	(20,611)	265,185	907,552	912,990	2,021,434
	₩	<u>(13,929)</u>	<u>42,382</u>	<u>387,791</u>	<u>667,724</u>	<u>1,242,011</u>	<u>2,325,979</u>
		<b>December 31, 2021</b>					
		<u>Within 1 month</u>	<u>1~3 months</u>	<u>3~12 months</u>	<u>1~5 Years</u>	<u>Over 5 years</u>	<u>Total</u>
Trading purpose derivatives:							
Currency	₩	206	(468)	-	(728)	-	(990)
Interest rate		(11,454)	(23,490)	9,271	(153,077)	535,475	356,725
Hedging purpose derivatives:							
Interest rate		33,896	115,454	180,556	631,338	687,222	1,648,466
	₩	<u>22,648</u>	<u>91,496</u>	<u>189,827</u>	<u>477,533</u>	<u>1,222,697</u>	<u>2,004,201</u>

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
**December 31, 2022 and 2021**  
(In millions of won)

**53. Risk Management, Continued**

*Gross settlement of derivative financial instruments*

		<b>December 31, 2022</b>					
		Within 1 month	1~3 months	3~12 months	1~5 Years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	52,376,416	31,340,410	63,562,432	77,238,222	7,031,148	231,548,628
Outflow		52,275,177	31,419,674	63,702,102	76,565,253	6,968,341	230,930,547
Interest							
Inflow		-	-	20,280	29,798	-	50,078
Outflow		-	-	20,280	28,887	-	49,167
Hedging purpose derivatives:							
Currency							
Inflow		382,471	331,797	8,713,900	15,749,336	3,656,288	28,833,792
Outflow		725,128	497,526	8,797,007	16,576,149	3,577,128	30,172,938
Total inflow	₩	52,758,887	31,672,207	72,296,612	93,017,356	10,687,436	260,432,498
Total outflow	₩	53,000,305	31,917,200	72,519,389	93,170,289	10,545,469	261,152,652
		<b>December 31, 2021</b>					
		Within 1 month	1~3 months	3~12 months	1~5 Years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	56,146,660	34,469,849	99,560,680	89,938,571	8,452,901	288,568,661
Outflow		56,090,442	34,338,644	99,230,057	90,332,369	8,476,594	288,468,106
Interest							
Inflow		-	-	-	41,860	-	41,860
Outflow		-	-	-	41,860	-	41,860
Hedging purpose derivatives:							
Currency							
Inflow		16,920	76,028	4,791,344	14,245,183	4,727,452	23,856,927
Outflow		16,786	79,183	6,083,666	14,902,210	4,624,965	25,706,810
Total inflow	₩	56,163,580	34,545,877	104,352,024	104,225,614	13,180,353	312,467,448
Total outflow	₩	56,107,228	34,417,827	105,313,723	105,276,439	13,101,559	314,216,776

Korea Development Bank and Subsidiaries  
Notes to the Consolidated Financial Statements  
**December 31, 2022 and 2021**  
(In millions of won)

Remaining contractual maturity analysis for guarantees and commitments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	994,382	1,284,030	2,713,574	6,009,532	420,036	11,421,554
Commitments		410,918	82,369	833,354	2,226,910	44,548,658	48,102,209
	₩	<u>1,405,300</u>	<u>1,366,399</u>	<u>3,546,928</u>	<u>8,236,442</u>	<u>44,968,694</u>	<u>59,523,763</u>
		<b>December 31, 2021</b>					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	1,314,744	1,012,325	2,923,833	4,026,986	1,937,634	11,215,522
Commitments		595,596	34,051	963,075	2,899,777	40,307,515	44,800,014
	₩	<u>1,910,340</u>	<u>1,046,376</u>	<u>3,886,908</u>	<u>6,926,763</u>	<u>42,245,149</u>	<u>56,015,536</u>

**SCHEDULE C – Separate Financial Statements as of and for the Years ended 31 December**  
**2022 and 2021**

## **Independent Auditors' Report**

Based on a report originally issued in Korean

The Board of Directors and Shareholders  
Korea Development Bank

### **Opinion**

We have audited the accompanying separate financial statements of Korea Development Bank (the "Bank"), which comprise the separate statements of financial position as of December 31, 2022 and 2021 and the separate statements of comprehensive income, the separate statements of changes in equity and the separate statements of cash flows for the years then ended, and notes to the separate financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying separate financial statements present fairly, in all material respects, the separate financial position of the Bank as of December 31, 2022 and 2021, and its separate financial performance and its separate cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS").

### **Basis for Opinion**

We conducted our audits in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Bank in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the separate financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Other Matter**

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such financial statements may differ from those generally accepted and applied in other countries.

### **Responsibilities of Management and Those Charged with Governance for the Financial Statements**

Management is responsible for the preparation and fair presentation of the separate financial statements in accordance with Korean IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the separate financial statements, management is responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Bank or to cease operations.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

### **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these separate financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

*Nexia Samduk*

Seoul, Korea  
March 28, 2023

This report is effective as of March 28, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

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Korea Development Bank  
Separate Statements of Financial Position  
December 31, 2022 and 2021

<i>(In millions of won)</i>	Notes	December 31, 2022	December 31, 2021
<b>Assets</b>			
Cash and due from banks	4,45,46,49	₩ 11,538,806	11,975,767
Securities measured at FVTPL	5,45,46,49	11,951,906	9,818,811
Securities measured at FVOCI	6,39,45,46,49	37,684,919	37,875,136
Securities measured at amortized cost	7,39,45,46,49	6,355,884	2,968,877
Loans measured at FVTPL	8,45,46,49	541,811	644,412
Loans measured at amortized cost	9,45,46,49	198,045,603	170,763,394
Derivative financial assets	10,45,46,47,49	9,794,455	5,305,572
Investments in subsidiaries and associates	11,48	27,992,331	28,710,062
Property and equipment, net	12,48	812,173	872,157
Investment property, net	13,48	81,713	82,860
Intangible assets, net	14,48	118,489	147,699
Defined benefit assets	21	87,770	9,353
Current tax assets		128,218	2,841
Assets held for sale	16	-	1,371,052
Other assets	15,45,46,49	7,711,217	5,873,907
<b>Total assets</b>		<b>₩ 312,845,295</b>	<b>276,421,900</b>
<b>Liabilities</b>			
Financial liabilities measured at FVTPL	17,45,46,49	₩ 1,469,724	2,067,144
Deposits	18,45,46,49	68,326,656	52,792,121
Borrowings	19,45,46,49	25,429,244	22,063,777
Debentures	20,45,46,49	158,711,896	145,365,330
Derivative financial liabilities	10,45,46,47,49	11,317,002	4,757,841
Provisions	22	1,448,030	1,567,530
Deferred tax liabilities	37	3,465,176	3,957,522
Current tax liabilities		15,513	254,882
Other liabilities	23,45,46,49	6,993,681	7,092,896
<b>Total liabilities</b>		<b>277,176,922</b>	<b>239,919,043</b>
<b>Equity</b>			
Issued capital	1,24	23,151,559	21,886,559
Capital surplus	24	2,475,310	2,479,010
Accumulated other comprehensive income	24	2,819,333	4,773,474
Retained earnings	24	7,222,171	7,363,814
(Regulatory reserve for credit losses of ₩247,252 million and ₩482,885 million as of December 31, 2022 and 2021, respectively)			
(Required reversal of regulatory reserve for credit losses of ₩35,257 million and ₩235,632 million as of December 31, 2022 and 2021, respectively)			
(Planned reversal of regulatory reserve for credit losses of ₩35,257 million and ₩235,632 million as of December 31, 2022 and 2021, respectively)			
<b>Total equity</b>		<b>35,668,373</b>	<b>36,502,857</b>
<b>Total liabilities and equity</b>		<b>₩ 312,845,295</b>	<b>276,421,900</b>

See accompanying notes to the separate financial statements.

Korea Development Bank  
Separate Statements of Comprehensive Income  
Years ended December 31, 2022 and 2021

(In millions of won, except earnings per share information)

	Notes	2022	2021
Interest income	25 ₩	6,846,735	4,125,276
Interest expense	25	(5,102,920)	(2,466,667)
<b>Net interest income</b>	48	1,743,815	1,658,609
Net fees and commission income	26	453,909	346,706
Dividend income	27	857,502	1,259,645
Net gain (loss) on securities measured at FVTPL	28	(39,423)	135,448
Net gain on financial liabilities measured at FVTPL	29	465,099	149,880
Net loss on securities measured at FVOCI	30	(57,194)	(27,921)
Net gain (loss) on derivatives	31	121,439	(202,091)
Net foreign currency transaction gain (loss)	32	(300,890)	154,367
Other operating income (expense), net	33	(349,827)	1,738,616
<b>Non-interest income, net</b>		1,150,615	3,554,650
<b>Provision for credit losses</b>	34	260,361	847,357
<b>General and administrative expenses</b>	35,48	876,371	815,746
<b>Operating income</b>	48	1,757,698	3,550,156
Reversal of impairment loss (impairment loss) on investments in subsidiaries and associates		(1,168,617)	363,055
Other non-operating income	36	13,906	14,530
Other non-operating expense	36	(10,328)	(272,379)
<b>Non-operating expense, net</b>		(1,165,039)	105,206
<b>Profit before income taxes</b>		592,659	3,655,362
<b>Income tax expense</b>	37	127,678	1,193,516
<b>Profit for the year</b>	24	464,981	2,461,846
(Profit for the year adjusted for regulatory reserve for credit losses: ₩500,238 million and ₩2,697,478 million for the years ended December 31, 2022 and 2021, respectively)			
<b>Other comprehensive income for the year, net of tax</b>	24		
<b>Items that are or may be reclassified subsequently to profit or loss:</b>			
Net loss on securities measured at FVOCI		(483,138)	(111,768)
Exchange differences on translation of foreign operations		93,126	99,912
Valuation gain on cash flow hedge		3,923	1,365
Net loss on hedges of net investments in foreign operations		(50,090)	(56,620)
		(436,179)	(67,111)
<b>Items that will not be reclassified to profit or loss:</b>			
Net gain (loss) on securities measured at FVOCI		(1,434,848)	2,777,436
Fair value changes on financial liabilities designated at fair value due to credit risk		90,220	6,246
Remeasurements of defined benefit liabilities		53,131	36,106
		(1,291,497)	2,819,788
		(1,727,676)	2,752,677
<b>Total comprehensive income for the year</b>	₩	(1,262,695)	5,214,523
<b>Earnings per share</b>			
Basic and diluted earnings per share (in won)	38 ₩	104	570

See accompanying notes to the separate financial statements.

Korea Development Bank  
Separate Statements of Changes in Equity  
Years ended December 31, 2022 and 2021

<i>(In millions of won)</i>		<b>Issued capital</b>	<b>Capital surplus</b>	<b>Accumulated other comprehensive income</b>	<b>Retained earnings</b>	<b>Total equity</b>
<b>Balance at January 1, 2021</b>	₩	20,765,729	2,484,398	2,064,371	5,068,032	30,382,530
Profit for the year		-	-	-	2,461,846	2,461,846
Net gain on securities measured at FVOCI		-	-	2,622,094	43,574	2,665,668
Exchange differences on translation of foreign operations		-	-	99,912	-	99,912
Valuation gain on cash flow hedge		-	-	1,365	-	1,365
Net loss on hedges of net investments in foreign operations		-	-	(56,620)	-	(56,620)
Fair value changes on financial liabilities designated at fair value due to credit risk		-	-	6,246	-	6,246
Remeasurements of defined benefit liabilities		-	-	36,106	-	36,106
<b>Total comprehensive income for the year</b>		-	-	2,709,103	2,505,420	5,214,523
Dividends		-	-	-	(209,638)	(209,638)
Paid in capital increase		1,120,830	(5,388)	-	-	1,115,442
<b>Transaction with owners</b>		1,120,830	(5,388)	-	(209,638)	905,804
<b>Balance at December 31, 2021</b>	₩	21,886,559	2,479,010	4,773,474	7,363,814	36,502,857
<b>Balance at January 1, 2022</b>	₩	21,886,559	2,479,010	4,773,474	7,363,814	36,502,857
Profit for the year		-	-	-	464,981	464,981
Net gain on securities measured at FVOCI		-	-	(2,144,451)	226,465	(1,917,986)
Exchange differences on translation of foreign operations		-	-	93,126	-	93,126
Valuation gain on cash flow hedge		-	-	3,923	-	3,923
Net loss on hedges of net investments in foreign operations		-	-	(50,090)	-	(50,090)
Fair value changes on financial liabilities designated at fair value due to credit risk		-	-	90,220	-	90,220
Remeasurements of defined benefit liabilities		-	-	53,131	-	53,131
<b>Total comprehensive income for the year</b>		-	-	(1,954,141)	691,446	(1,262,695)
Dividends		-	-	-	(833,089)	(833,089)
Paid in capital increase		1,265,000	(3,700)	-	-	1,261,300
<b>Transaction with owners</b>		1,265,000	(3,700)	-	(833,089)	428,211
<b>Balance at December 31, 2022</b>	₩	23,151,559	2,475,310	2,819,333	7,222,171	35,668,373

See accompanying notes to the separate financial statements.

Korea Development Bank  
Separate Statements of Cash Flows  
Years ended December 31, 2022 and 2021

(In millions of won)

	Notes	2022	2021
<b>Cash flows from operating activities</b>			
Profit for the year	₩	464,981	2,461,846
Adjustments for:			
Income tax expense	37	127,678	1,193,516
Interest income	25	(6,846,735)	(4,125,276)
Interest expense	25	5,102,920	2,466,667
Dividend income	27	(857,502)	(1,259,645)
Loss (gain) on valuation of securities measured at FVTPL	28	52,935	(144,635)
Gain on disposal of securities measured at FVTPL		(120,455)	(6,654)
Net gain on financial liabilities measured at FVTPL	29	(465,099)	(149,880)
Loss on disposal of securities measured at FVOCI	30	57,194	27,921
Impairment loss on securities measured at amortized cost	7	50	149
Net loss (gain) on loans measured at FVTPL	33	78,954	(1,895,878)
Loss on valuation of derivatives		1,993,887	1,255,411
Net gain on fair value hedged items	31	(1,528,187)	(497,269)
Loss (gain) on foreign exchange translations	32	289,321	(163,901)
Gain on disposal of investments in subsidiaries and associates	33	(5,424)	(90,009)
Reversal of impairment loss (impairment loss) on investments in subsidiaries and associates		1,168,617	(363,055)
Provision for loan loss allowance	34	410,450	855,548
Increase (reversal) of provision for other assets	34	(579)	1,076
Increase of provision for payment guarantees	22	136,989	133,641
Reversal of provision for unused commitments	22	(256,820)	(137,830)
Reversal of financial guarantee provision	22	(29,679)	(5,078)
Increase (reversal) of provision for possible losses from lawsuits	22	(1,492)	1,408
Reversal of provision for restoration	22	(2,008)	(1,820)
Increase of other provisions		-	8,266
Defined benefit costs	21	70,092	39,994
Depreciation of property and equipment	12	71,584	70,860
Impairment loss on assets held for sale		-	258,401
Gain on disposal of property and equipment	36	(740)	(1,482)
Loss on disposal of intangible assets	36	2	-
Gain on disposal of assets held for sale		-	(3,608)
Depreciation of investment property	13	2,084	2,209
Amortization of intangible assets	14	54,262	53,837
Gain on redemption of debentures		(4)	-
		(497,705)	(2,477,116)
Changes in operating assets and liabilities:			
Due from banks		(1,054,373)	(856,356)
Securities measured at FVTPL		560,407	146,996
Loans measured at FVTPL		23,647	27,980
Loans measured at amortized cost		(24,241,420)	(16,678,716)
Derivative financial instruments		13,948	144,735
Other assets		(1,116,960)	(1,050,940)
Financial liabilities measured at FVTPL		30,721	290,136
Deposits		15,482,874	6,871,809
Defined benefit liabilities (assets)		(77,192)	(50,093)
Other liabilities		(845,996)	68,970
		(11,224,344)	(11,085,479)
Income taxes refund (paid)		(243,693)	264,756
Interest received		6,230,685	4,110,377
Interest paid		(4,424,200)	(2,556,079)
Dividends received		855,259	1,263,418
<b>Net cash used in operating activities</b>	₩	(8,839,017)	(8,018,277)

(Continued)

Korea Development Bank  
Notes to the Separate Financial Statements  
December 31, 2022 and 2021

(In millions of won)

	Notes	2022	2021
<b>Cash flows from investing activities</b>			
Net increase of securities measured at FVTPL	₩	(2,590,301)	(1,497,404)
Disposal of securities measured at FVOCI	6	12,325,062	37,451,107
Acquisition of securities measured at FVOCI	6	(14,118,389)	(36,914,523)
Redemption of securities measured at amortized cost	7	1,522,000	700,000
Acquisition of securities measured at amortized cost	7	(4,895,925)	(2,888,991)
Disposal of property and equipment	12	67,505	9,697
Acquisition of property and equipment	12	(14,768)	(36,321)
Disposal of intangible assets	14	1,521	858
Acquisition of intangible assets	14	(25,993)	(13,883)
Disposal of investments in subsidiaries and associates		1,845,131	884,296
Acquisition of investments in subsidiaries and associates		(939,632)	(929,733)
Disposal of assets held for sale		-	87,502
<b>Net cash used in investing activities</b>		<b>(6,823,789)</b>	<b>(3,147,395)</b>
<b>Cash flows from financing activities</b>			
Increase of financial liabilities measured at FVTPL		125,000	319,690
Decrease of financial liabilities measured at FVTPL		(165,302)	(79,143)
Proceeds from borrowings		49,384,998	44,507,510
Repayment of borrowings		(46,137,184)	(41,404,496)
Proceeds from issuance of debentures		134,409,386	117,504,007
Repayment of debentures		(119,518,136)	(110,135,030)
Decrease in lease liabilities	23	(27,893)	(25,020)
Dividends		(833,089)	(209,638)
Paid in capital increase		696,300	1,115,442
<b>Net cash provided by financing activities</b>		<b>17,934,080</b>	<b>11,593,322</b>
<b>Effects from changes in foreign currency exchange rate for cash and cash equivalents held</b>		<b>147,619</b>	<b>243,849</b>
<b>Net increase in cash and cash equivalents</b>		<b>2,418,893</b>	<b>671,499</b>
<b>Cash and cash equivalents at beginning of the year</b>		<b>9,453,576</b>	<b>8,782,077</b>
<b>Cash and cash equivalents at end of the year</b>	43 ₩	<b>11,872,469</b>	<b>9,453,576</b>

See accompanying notes to the separate financial statements.

Korea Development Bank  
Notes to the Separate Financial Statements  
December 31, 2022 and 2021

**1. Reporting Entity**

Korea Development Bank (the “Bank”) was established on April 1, 1954, in accordance with *The Korea Development Bank Act* to finance and manage major industrial projects.

The Bank is engaged in the banking industry under *The Korea Development Bank Act* and other applicable statutes, and in the fiduciary in accordance with *the Financial Investment Services and Capital Markets Act*.

Korea Finance Corporation (KoFC), the former ultimate parent company, and KDB Financial Group Inc. (KDBFG), the former immediate parent company, were established by spin-offs of divisions of the Bank as of October 28, 2009. KoFC and KDBFG were merged into the Bank, effective as of December 31, 2014. Issued capital is ₩23,151,559 million with 4,630,311,768 shares of issued and outstanding as of December 31, 2022 and 100% of the Bank’s shares are owned by the government of the Republic of Korea.

The Bank’s head office is located in 14, Eunhaeng-ro (Yeouido-dong), Yeongdeungpo-gu, Seoul and its service network as of December 31, 2022 is as follows:

	Domestic		Overseas		Representative offices	Total
	Head Office	Branches	Branches	Subsidiaries		
KDB	1	60	11	7	7	86

**2. Basis of Preparation**

**(1) Application of accounting standards**

These separate financial statements have been prepared in accordance with the Korean International Financial Reporting Standards (“K-IFRS”) enacted by the *Act on External Audit of Stock Companies*.

**(2) Changes and disclosures of accounting policies**

**(i) New and amended standards adopted**

The Bank newly applied the following amended and enacted standards for the annual period beginning on January 1, 2022. The nature and the impact of each new standard or amendment are described below:

*Amendments to K-IFRS 1116 ‘Lease’ - Covid-19-Related Rent Concessions etc. beyond June 30, 2021*

The application of the practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before 30 June 2022. A lessee shall apply the practical expedient consistently to eligible contracts with similar characteristics and in similar circumstances. The amendment does not have a significant impact on the separate financial statements.

*Amendments to K-IFRS 1103 ‘Business Combination’ – Reference to the Conceptual Framework*

The amendments update a reference of definition of assets and liabilities to qualify for recognition in revised Conceptual Framework for Financial Reporting. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of K-IFRS 1037 ‘Provisions, Contingent Liabilities and Contingent Assets’, and K-IFRS 2121 ‘Levies’. The amendments also confirm that contingent assets should not be recognized at the acquisition date. The amendment does not have a significant impact on the separate financial statements.

*Amendments to K-IFRS 1016 ‘Property, Plant and Equipment’ - Proceeds before intended use*

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize and disclose the proceeds from selling such items, and the costs of producing those items, as profit or loss. The amendment does not have a significant impact on the separate financial statements.

Korea Development Bank  
Notes to the Separate Financial Statements  
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*Amendments to K-IFRS 1037 'Provisions, Contingent Liabilities and Contingent Assets' – Onerous Contracts: Cost of Fulfilling a Contract*

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendment does not have a significant impact on the separate financial statements.

*Annual improvements to K-IFRS 2018-2020*

The amendment does not have a significant impact on the separate financial statements.

- K-IFRS 1101 'First time Adoption of Korean International Financial Reporting Standards' – Subsidiaries that are first-time adopters
- K-IFRS 1109 'Financial Instruments' – Fees related to the 10% test for derecognition of financial liabilities  
The amendment clarifies that in applying the '10 per cent' test to assess whether to derecognise a financial liability, an entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.
- K-IFRS 1116 'Leases' – Lease incentives
- K-IFRS 1041 'Agriculture' – Measuring fair value

Korea Development Bank  
Notes to the Separate Financial Statements  
December 31, 2022 and 2021

2. **Basis of Preparation, Continued**

**(ii) Change of accounting policies**

The Bank has changed the following accounting policy for its annual reporting period commencing January 1, 2022.

The Bank had classified due from banks with restriction to use, such as reserve requirement deposits, as due from banks measured at amortized cost rather than cash and cash equivalents; however, following the IFRS Interpretations Committee's decision that cash and cash equivalents include restricted demand deposits, some classified due from financial institutions with restriction to use, such as reserve requirement deposits, the Bank has retrospectively classified these accounts as cash and cash equivalents from January 1, 2022. The comparative separate financial statements have been restated to reflect the changes made to retrospective application.

The application of these accounting policy changes has no effect on the separate statements of financial position as of December 31, 2022 and 2021, and the separate statements of comprehensive income for the years ended December 31, 2022 and 2021.

The effects on the consolidated statements of cash flows for the years ended December 31, 2022 and 2021, are as follows:

<Increase (decrease) by cash flow statement line item>

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Increase (decrease) in due from banks	₩ (3,219,178)	1,316,120
Increase in effects from changes in foreign currency exchange rate for cash and cash equivalents held	13,560	18,438
Increase in cash and cash equivalents at beginning of the year	4,387,441	3,052,883
Increase in cash and cash equivalents at end of the year	1,181,823	4,387,441

< Cash flow statement for year ended December 31, 2022>

	Prior to accounting policy change	After accounting policy change	Increase (decrease)
Due from banks	₩ 2,164,805	(1,054,373)	(3,219,178)
Effects from changes in foreign currency exchange rate for cash and cash equivalents held	134,059	147,619	13,560
Cash and cash equivalents at beginning of the year	5,066,135	9,453,576	4,387,441
Cash and cash equivalents at end of the year	10,690,646	11,872,469	1,181,823

< Cash flow statement for year ended December 31, 2021>

	Prior to accounting policy change	After accounting policy change	Increase (decrease)
Due from banks	₩ (2,172,476)	(856,356)	1,316,120
Effects from changes in foreign currency exchange rate for cash and cash equivalents held	225,411	243,849	18,438
Cash and cash equivalents at beginning of the year	5,729,194	8,782,077	3,052,883
Cash and cash equivalents at end of the year	5,066,135	9,453,576	4,387,441

Korea Development Bank  
Notes to the Separate Financial Statements  
December 31, 2022 and 2021

2. **Basis of Preparation, Continued**

*(iii) New standards and interpretations issued but not effective*

The following new standards, interpretations and amendments to existing standards have been issued but not effective for annual periods beginning after January 1, 2022, and the Bank has not early adopted them. The nature and the impact of each new standard, amendment and enactments are described below:

*Amendments to K-IFRS 1001 'Presentation of Financial Statements' - Classification of Liabilities as Current or Non-current*

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the management's expectations thereof. Also, the settlement of liability includes the transfer of the entity's own equity instruments; however, it would be excluded if an option to settle the liability by the transfer of the entity's own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the separate financial statements.

*Issuance of K-IFRS 1117 Insurance Contracts*

K-IFRS 1117 Insurance Contracts will replace K-IFRS 1104 Insurance Contracts. This standard requires an entity to estimate future cash flows of an insurance contract and measure insurance liabilities using discount rates applied with assumptions and risks at the measurement date and recognize insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual reporting period. In addition, investment components (refunds due to termination and maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and net insurance income and net investment income are presented separately to enable users of the information to understand the sources of net income. This standard should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted for entities that applied K-IFRS 1109 Financial Instruments. The Bank is scheduled to apply this standard for annual reporting period beginning on January 1, 2023. The Bank does not expect that these applications have a significant impact on the separate financial statements.

*Amendments to K-IFRS 1001 Presentation of Financial Statements – Accounting Policy Disclosure*

The amendments require an entity to define and disclose their material accounting policy information. IFRS Practice Statement 2 Making Materiality Judgements was amended to explain and demonstrate how to apply the concept of materiality. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the separate financial statements.

*Amendments to K-IFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors*

The amendments introduce the definition of accounting estimates and clarify how to distinguish changes in accounting estimates from changes in accounting policies. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the separate financial statements.

*Amendments to K-IFRS 1012 Income Taxes – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction*

The amendments narrow the scope of the deferred tax recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the separate financial statements.

Korea Development Bank  
Notes to the Separate Financial Statements  
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**2. Basis of Preparation, Continued**

*Amendments to K-IFRS 1001 Presentation of Financial Statements - Disclosure of gains or losses on valuation of financial liabilities with exercise price adjustment conditions*

The amendments require disclosures about gains or losses on valuation occurred for the reporting period (but are limited to those included in profit or loss) for the conversion options or warrants (or financial liabilities with warrants), if all or part of the financial instrument whose exercise price is adjusted due to the issuers' stock price fluctuations, are classified as financial liabilities according to paragraph 11 of K-IFRS 1032 Financial Instruments: Presentation. The amendments should be applied for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Bank does not expect that these amendments have a significant impact on the consolidated financial statements.

**(3) Basis of measurement**

The financial statements have been prepared on the historical cost basis except for the following material items in the statement of financial position:

- Derivative financial instruments measured at fair value
- Financial instruments measured at fair value through profit or loss
- Financial instruments measured at fair value through other comprehensive income
- Fair value hedged financial instruments with changes in fair value, due to hedged risks, recognized in profit or loss
- Liabilities for defined benefit plans, which are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets.

**(4) Functional and presentation currency**

These financial statements are presented in Korean won ("₩"), which is the Bank's functional currency and the currency of the primary economic environment in which the Bank operates.

2. **Basis of Preparation, Continued**

**(5) Use of estimates and judgments**

The preparation of the financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Management's estimates of outcomes may differ from actual outcomes if management's estimates and assumptions based on management's best judgment at the reporting date are different from the actual environment.

Estimates and assumptions are continually evaluated and any change in an accounting estimate is recognized prospectively by including it in profit or loss in the period of the change, if the change affects that period only.

The following are the key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

***(i) Fair value of financial instruments***

Financial instruments measured at fair value through profit or loss and other comprehensive income, and derivative instruments are recognized and measured at fair value. If the market for a financial instrument is not active, fair value is determined either by using a valuation technique or independent third-party valuation service. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, referencing to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models.

Financial instruments, which are not actively traded in the market and those with less transparent market prices, will have less objective fair values and require broad judgment on liquidity, concentration, uncertainty in market factors and assumptions in price determination and other risks.

Diverse valuation techniques are used to determine the fair value of financial instruments, from generally accepted market valuation models to internally developed valuation models that incorporate various types of assumptions and variables.

***(ii) Credit losses allowance***

The Bank tests impairment and recognizes loss allowances on financial assets classified at amortized cost, debt instruments measured at fair value through other comprehensive income and recognizes provisions for payment guarantee, financial guarantee and unused commitments. Accuracy of allowances and provisions for credit losses is dependent upon estimation of expected cash flows of the borrower for individually assessed allowances of loans, and upon assumptions and methodology used for collectively assessed allowances for groups of loans, guarantees and unused loan commitments.

The pandemic of COVID-19 has a negative impact on the global economy despite of the Korean government's financial and economic stabilization packages. It may have a negative impact on the financial position and financial performance of the Bank due to the increase of the expected credit losses on specific portfolios and the potential losses on financial assets. The detail of credit risk exposures by industry affected by the pandemic of COVID-19 as of December 31, 2022 is disclosed in Note 49. (2) and the exposures by industries could be changed according to economic fluctuations.

Taking these circumstances into account comprehensively, the Bank recalculated the forward-looking information used to estimate the expected credit loss in accordance with K-IFRS 1109 'Financial Instruments' as of December 31, 2022. During the 12-month period since the previous year ended, there have been changes in forward-looking information that affect expected credit losses. It is predicted that major economic factors, such as the unemployment rate and economic growth rate, will deteriorate due to the impact of COVID-19. To reflect these changes, the Bank recalculated the forward-looking information by means of increasing the probability of recession used in generating future economic scenarios and will continue to monitor the forward-looking information on a quarterly basis.

Korea Development Bank  
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2. **Basis of Preparation, Continued**

***(iii) Deferred taxes***

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date. Deferred income tax assets are recognised to the extent that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Actual income taxes in the future may not be identical to the recognised deferred tax assets and liabilities.

***(iv) Defined benefit liabilities***

The Bank operates a defined benefit plan. Defined benefit liability is calculated by annual actuarial valuations as of the reporting date. To perform the actuarial valuations, assumptions for discount rates, future salary increases and others are required to be estimated. Defined benefit plans contain significant uncertainties in estimations due to its long-term nature.

**(6) Approval date for the separate financial statements**

The separate financial statements were authorized for issue by the Board of Directors on March 28, 2023, which will be submitted for approval to the shareholders' meeting to be held on March 29, 2023.

**3. Significant Accounting Policies**

The significant accounting policies applied by the Bank in preparation of its separate financial statements are included below. The accounting policies set out below have been applied consistently to all periods presented in these separate financial statements.

**(1) Investments in subsidiaries and associates**

The accompanying financial statements are separate financial statements in accordance with K-IFRS 1027 '*Separate Financial Statements*' and investments in subsidiaries and associates are accounted for at cost, not by performance and net asset reported by the investee. Dividends received from subsidiaries and associates are recognised as income as of the time the right to receive the dividends is established.

**(2) Business combination of entities under common control**

The assets and liabilities acquired under business combinations under common control are recognised at the carrying amounts recognised previously in the consolidated financial statements of the ultimate parent. The difference between consideration transferred and carrying amounts of net assets acquired is recognised as part of share premium.

**(3) Operating segments**

The Bank makes decisions regarding allocation of resources to segments and categorizes segments, based on internal reports reviewed periodically by the chief operating decision maker, to assess performance. Information on segments reported to the chief operating decision maker includes items directly attributable to segments as well as those that can be allocated on a reasonable basis. Unallocated items mainly comprise corporate assets (such as the Bank Headquarters), head office expenses, and income tax assets and liabilities. The Bank recognises the CEO as the chief operating decision maker.

**(4) Foreign exchange**

***(i) Foreign currency transactions***

Transactions in foreign currencies are translated to the functional currency of the Bank, at exchange rates of the dates of transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortized cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortized cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on transactions and translations of monetary items are recognised in profit or loss, except for differences arising on the translation of a financial instruments designated as hedges of the net investment in foreign operations, or cash flow hedge, which are recognised in other comprehensive income.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit or loss, any exchange component of that gain or loss shall be recognised in profit or loss.

***(ii) Foreign operations***

If the presentation currency of the Bank is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

Unless the functional currency of foreign operations is in a state of hyperinflation, assets and liabilities of foreign operations are translated at the closing exchange rate at the end of the reporting period. Revenues and expenses on the statement of comprehensive income are translated at the exchange rates of the date of transaction. Foreign currency differences that arise from translation are recognized as other comprehensive income, and the disposal of a foreign operation is re-categorized as profit or loss as of the moment of the disposal profit or loss is recognized.

**3. Significant Accounting Policies, Continued**

Any goodwill arising on the acquisition of a foreign operation, and any adjustments in fair value to the carrying amounts of assets and liabilities due to such acquisition, are treated as assets and liabilities of the foreign operation. Therefore, such are expressed in the functional currency of the foreign operations and, alongside other assets and liabilities of the foreign operation, translated at the closing exchange rate.

In the case of the disposal of a foreign operation, cumulative amounts of exchange difference regarding the foreign operation, recognized separately from other comprehensive income, are re-categorized from assets to profit or loss as of the disposal profit or loss is recognized.

***(iii) Foreign exchange of net investment in foreign operations***

Monetary items receivable from or payable to a foreign operation, with none or little possibility of being settled in the foreseeable future, are considered a part of the net investment in the foreign operation. Therefore, the exchange difference is recognised as comprehensive income or loss in the financial statement and re-categorized to profit or loss as of the disposal of the related net investment.

**(5) Recognition and measurement of financial instruments**

***(i) Initial recognition***

The Bank recognizes a financial asset or a financial liability in its separate statement of financial position when the Bank becomes a party to the contractual provisions of the instrument. A regular way purchase or sale of financial assets is recognized and derecognized using trade date accounting.

The Bank classifies financial assets as financial assets at fair value through profit or loss, financial assets at fair value through other comprehensive income, or financial assets at amortized cost on the basis of the Bank's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. The Bank classifies financial liabilities as financial liabilities at fair value through profit or loss, or financial liabilities at amortized cost.

At initial recognition, a financial asset or financial liability is measured at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

***(ii) Subsequent measurement***

After initial recognition, financial instruments are measured at amortized cost or fair value based on classification at initial recognition.

***Amortized cost***

The amortized cost is the amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.

***Fair value***

Fair values, which the Bank primarily uses for the measurement of financial instruments, are the published price quotations based on market prices or dealer price quotations of financial instruments traded in an active market where available. These are the best evidence of fair value. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, an entity in the same industry, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

If the market for a financial instrument is not active, fair value is determined either by using a valuation technique or independent third-party valuation service. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, referencing to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models.

**3. Significant Accounting Policies, Continued**

The Bank uses valuation models that are commonly used by market participants and customized for the Bank to determine fair values of common over-the-counter (“OTC”) derivatives such as options, interest rate swaps and currency swaps which are based on the inputs observable in markets. For more complex instruments, the Bank uses internally developed models, which are usually based on valuation methods and techniques generally used within the industry, or a value measured by an independent external valuation institution as the fair values if all or some of the inputs to the valuation models are not market observable and therefore it is necessary to estimate fair value based on certain assumptions.

If the valuation technique does not reflect all factors which market participants would consider in setting a price, the fair value is adjusted to reflect those factors. Those factors include counterparty credit risk, bid-ask spread, liquidity risk and others.

The chosen valuation technique makes maximum use of market inputs and relies as little as possible on entity-specific inputs. It incorporates all factors that market participants would consider in setting a price and is consistent with economic methodologies applied for pricing financial instruments. Periodically, the Bank calibrates the valuation technique and tests its validity using prices of observable current market transactions of the same instrument or based on other relevant observable market data.

***(iii) Derecognition***

Derecognition is the removal of a previously recognized financial asset or financial liability from the statement of financial position. The Bank derecognizes a financial asset or a financial liability when, and only when:

***Derecognition of financial assets***

Financial assets are derecognized when the contractual rights to the cash flows from the financial assets expire or the financial assets have been transferred and substantially all the risks and rewards of ownership of the financial assets are also transferred, or all the risks and rewards of ownership of the financial assets are neither substantially transferred nor retained and the Bank has not retained control. If the Bank neither transfers nor disposes of substantially all the risks and rewards of ownership of the financial assets, the Bank continues to recognize the financial asset to the extent of its continuing involvement in the financial asset.

If the Bank transfers the contractual rights to receive the cash flows of the financial asset, but retains substantially all the risks and rewards of ownership of the financial asset, the Bank continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

***Derecognition of financial liabilities***

Financial liabilities are derecognized from the statement of financial position when the obligation specified in the contract is discharged, cancelled or expires.

***(iv) Offsetting***

Financial assets and liabilities are offset and the net amount reported in the separate statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously.

**(6) Cash and cash equivalents**

Cash and cash equivalents comprise balances with original maturities of three months or less from the date of acquisition that are subject to an insignificant risk of changes in their fair value, including cash on hand, deposits held at call with banks and other highly liquid short-term investments with original maturities of three months or less.

**3. Significant Accounting Policies, Continued**

**(7) Non-derivative financial assets**

***(i) Financial assets at fair value through profit or loss***

Any non-derivative financial asset classified as held for trading or not classified as financial assets at fair value through other comprehensive income or financial assets measured at amortized cost is categorized under financial assets at fair value through profit or loss.

The Bank may designate certain financial assets upon initial recognition as at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'an accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

After initial recognition, a financial asset at fair value through profit or loss is measured at fair value and gains or losses arising from a change in the fair value are recognized in profit or loss. Interest income and dividend income from financial assets at fair value through profit or loss are also recognized in profit or loss.

***(ii) Financial assets at fair value through other comprehensive income***

The Bank classifies financial assets as financial assets at fair value through other comprehensive income if they meet the following conditions: 1) debt instruments that are a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, and consistent with representing solely payments of principal and interest on the principal amount outstanding or 2) equity instruments, not held for trading with the objective of generating a profit from short-term fluctuations in price or dealer's margin, designated as financial assets at fair value through other comprehensive income.

After initial recognition, a financial asset at fair value through other comprehensive income is measured at fair value. Gain and loss from changes in fair value, other than dividend income and interest income amortized using effective interest method and exchange differences arising on monetary items which are recognized directly in profit or loss, are recognized as other comprehensive income in equity.

At disposal of financial assets at fair value through other comprehensive income, cumulative gain or loss is recognized as profit or loss for the reporting period. However, cumulative gain or loss of equity instrument designated as fair value through other comprehensive income are not recycled to profit or loss at disposal.

Financial assets at fair value through other comprehensive income denominated in foreign currencies are translated at the closing rate. Exchange differences resulting from changes in amortized cost are recognized in profit or loss, and other changes are recognized as equity.

***(iii) Financial assets measured at amortized cost***

A financial asset, which are held within the business model whose objective is to hold assets in order to collect contractual cash flows and consistent with representing solely payments of principal and interest on the principal amount outstanding, are classified as a financial asset at amortized cost. Financial assets at amortized cost are subsequently measured at amortized cost using the effective interest method after initial recognition and interest income is recognized using the effective interest method.

**3. Significant Accounting Policies, Continued**

**(8) Expected credit loss of financial assets**

The Bank measures expected credit loss and recognizes loss allowance at the end of the reporting period for financial assets measured at amortized cost and fair value through other comprehensive income with the exception of financial asset measured at fair value through profit or loss.

The expected credit loss (“ECL”) is the weighted average amount of possible outcomes within a certain range, reflecting the time value of money, estimates on the past, current and future situations, and information accessible without excessive cost of effort.

The Bank uses the following three measurement techniques in accordance with K-IFRS:

- General approach: for financial assets and off-balance-sheet unused credit line that are not applied below two approaches
- Simplified approach: for receivables, contract assets and lease receivables
- Credit-impaired approach: for purchased or originated credit-impaired financial assets

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses at each reporting date.

The Bank applies the simplified approach to 1) trade receivables and contract assets that do not have a significant financing component or 2) trade receivables, contract assets and lease receivables upon determining the Bank’s accounting policies as the application of the simplified approach. The approach requires expected lifetime losses to be recognized from initial recognition of the financial assets. Under credit-impaired approach, the Bank shall only recognize the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception
- Other changes in the rates or terms of an existing financial instrument that would be significantly different if the instrument was newly originated or issued at the reporting date
- An actual or expected significant change in the financial instrument’s external credit rating
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioural scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past due information

***(i) Forward-looking information***

The Bank uses forward-looking information, when it determines whether the credit risk has increased significantly since initial recognition and measures expected credit losses.

The Bank assumes the risk component has a certain correlation with the business cycle, and calculates the expected credit loss by reflecting the forward-looking information with macroeconomic variables on the measurement inputs.

Forward looking information used in calculation of expected credit loss is derived after comprehensive consideration of a variety of factors including scenario in management planning, worst-case scenario used for stress testing, third party forecast, and others.

**3. Significant Accounting Policies, Continued**

***(ii) Measuring expected credit losses on financial assets at amortized cost***

The amount of the loss on financial assets at amortized cost is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. The Bank estimates expected future cash flows for financial assets that are individually significant (individual assessment of impairment).

For financial assets that are not individually significant, the Bank collectively estimates expected credit loss by grouping loans with homogeneous credit risk profile (collective assessment of impairment).

***Individual assessment of impairment***

Individual assessment of impairment losses is calculated using management's best estimate on present value of expected future cashflows. The Bank uses all the available information including operating cash flow of the borrower and net realizable value of any collateral held.

***Collective assessment of impairment***

Collective assessment of loss allowance involves historical loss experience along with incorporation of forward-looking information. Such process incorporates factors such as type of collateral, product and borrowers, credit rating, size of portfolio and recovery period and applies probability of default on a group of assets and loss given default by type of recovery method. Also, the expected credit loss model involves certain assumption to determine input based on loss experience and forward-looking information. These models and assumptions are periodically reviewed to reduce gap between loss estimate and actual loss experience.

The expected credit loss for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

***(iii) Measuring expected credit losses on financial assets at fair value through other comprehensive income***

Measuring method of expected credit losses on financial assets at fair value through other comprehensive income is equal to the method of financial assets at amortized cost, except for changes in loss allowances that are recognized as other comprehensive income. Amounts recognized in other comprehensive income for sale or repayment of financial assets at fair value through other comprehensive income are reclassified to profit or loss.

**3. Significant Accounting Policies, Continued**

**(9) Derivative financial instruments including hedge accounting**

Derivative financial instruments are initially recognised at fair value at the inception of the contract and re-estimated at fair value subsequently. The recognition of profit or loss due to changes in fair value of derivative instruments is as described below:

***(i) Hedge accounting***

Derivative financial instruments are accounted differently depending on whether hedge accounting is applied, and therefore, are classified into trading purpose derivatives and hedging purpose derivatives.

Upon the transaction of hedging purpose derivatives, two different types of hedge accounting are applied; a fair value hedge, and a cash flow hedge. A fair value hedge is a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss. A cash flow hedge is a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and (ii) could affect profit or loss.

At the inception of the hedge relationship, the Bank formally documents the relationship between the hedged item and the hedging instrument, including the nature of the risk, the objective and strategy for undertaking the hedge, and the method that will be used to assess the effectiveness of the hedging relationship.

***Fair value hedge***

For designated and qualifying fair value hedges, the change in the fair value of a hedging derivative is recognised in profit or loss in the statement of comprehensive income. Meanwhile, the change in the fair value of the hedged item, attributable to the risk hedged, is recorded as part of the carrying value of the hedged item and is also recognised in profit or loss in the statement of comprehensive income. When the hedge no longer meets the criteria for hedge accounting, the hedge relationship is terminated. For hedged item recorded at amortized cost, the difference between the carrying value of the hedged item on termination and the face value is amortized over the remaining term of the original hedge using the EIR.

***Cash flow hedge***

For designated and qualifying cash flow hedges, the effective portion of gain or loss on the hedging instruments is initially recognised directly in equity. The ineffective portion of the gain or loss on the hedging instrument is recognised immediately in the statement of comprehensive income. When the hedged cash flow affects the profit or loss in statement of comprehensive income, the gain or loss on the hedging instrument is recorded in the corresponding income or expense line in profit or loss in the statement of comprehensive income. When a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the hedged forecasted transaction is ultimately recognised in the statement of comprehensive income. When a forecasted transaction is no longer expected to occur, the cumulative gain and loss that was reported in equity is immediately transferred to profit or loss in the statement of comprehensive income.

***Hedges of net investments in foreign operations***

The Bank designates non-derivative financial instruments as hedging instruments for foreign currency risk arising from net investments in foreign operations and recognises the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge in other comprehensive income. The cumulative amounts recognised in other comprehensive income relating to both the foreign exchange differences arising on translation of the results and financial position of the foreign operation and the gain or loss on the hedging instrument that is determined to be an effective hedge of the net investment are reclassified from equity to profit or loss as a reclassification adjustment when the Bank disposes of the foreign operation.

***(ii) Trading purpose derivatives***

For trading purpose derivatives transaction, changes in the fair value of derivatives are recognised in net income.

**(10) Day one profit or loss recognition**

For financial instruments classified as level 3 on the fair value level hierarchy measured using assess variables not observable in the market, the difference between the fair value at initial recognition and the transaction price, which is equivalent to Day one profit or loss, is amortized by using the straight-line method over time.

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**3. Significant Accounting Policies, Continued**

**(11) Property and equipment**

The Bank's property and equipment are recognised at the carrying amount at historical costs less accumulated depreciation and accumulated impairment in value. Historical costs include the expenditures directly related to the acquisition of assets.

Subsequent costs are recognised in the carrying amount of assets or, if appropriate, as separate assets if the probabilities future economic benefits associated with the assets will flow into the Bank and the costs can be measured reliably; the carrying amount of the replaced part is derecognised. Furthermore, any other repairs or maintenances are charged to profit or loss as incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to the amount of residual value less acquisition cost over the following estimated useful lives:

Type	Useful lives (years)
Buildings	20 ~ 50
Structure	10 ~ 40
Movable property	4

Property and equipment are impaired when the carrying amount exceeds the recoverable amount. The Bank assesses residual value and economic life of its assets at each reporting date and adjusts useful lives when necessary. Any gain or loss arising from the disposal of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognised in non-operating income (expense) in the statement of comprehensive income.

**(12) Investment property**

The Bank classifies property held for rental income or benefits from capital appreciation as investment property. Investment property is measured initially at cost, including transaction costs. Subsequent to initial recognition, the cost model is applied. Subsequent to initial recognition, an item of investment property is carried at its cost less any accumulated depreciation and any accumulated impairment loss.

Investment properties are derecognised either when they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognised in the statement of comprehensive income in the period of de-recognition. Reclassification to other account is made if there is a change in use of corresponding investment property.

Depreciation of investment property is calculated using the straight-line method over its estimated useful lives as follows:

Type	Useful lives (years)
Buildings	20 ~ 50
Structure	10 ~ 40

**3. Significant Accounting Policies, Continued**

**(13) Intangible assets**

An intangible asset is recognised only when its cost can be measured reliably, and the probabilities future economic benefits from the asset will flow into the Bank are high. Separately acquired intangible assets are recognised at the acquisition cost, and subsequently, the cost less accumulated depreciation and accumulated impairment is recognised as the carrying amount.

Intangible assets with finite lives are amortized over the four-year to 30-year period of useful economic lives using the straight-line method. At the end of each reporting period, the Bank reviews intangible assets for any evidence that indicate impairment, and upon the presence of such evidence, the Bank estimates the amount recoverable and recognises the loss accordingly.

Intangible assets with indefinite useful lives are not amortized but are tested for impairment annually. Furthermore, the Bank reviews such intangible assets to determine whether it is appropriate to consider these assets to have indefinite useful lives. If in the case the Bank concludes an asset is not qualified to be classified as non-finite, prospective measures are taken to consider such an asset as finite.

**(14) Leases**

The Bank recognizes a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments at the commencement date of the lease. The Bank elected not to apply the requirements to the short-term leases and leases of low value assets.

*Right-of-use asset*

The right-of-use asset is measured at its cost less subsequent accumulated depreciation and accumulated impairment loss with adjustments reflected arising from remeasurements of the lease liability. The cost of the right-of-use asset comprise the amount of the initial measurement of the lease liability, any initial direct costs incurred by the lessee and any lease payments made at or before the commencement date, less any lease incentive received. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis from the commencement date of the lease.

*Lease liabilities*

At the commencement date, the lease liability is measured at present value of the lease payments that are not paid at that date. Lease payments include fixed payments (including in-substance fixed payments), less any lease incentives receivable, variable lease payments that depend on an index or a rate, amounts expected to be payable by the lessee under residual value guarantees, the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease. The variable lease payments that do not depend on an index or a rate are recognized as an expense in the period in which the event or condition that triggers those payments occurs.

When measuring the present value, the lease payments are discounted using the interest rate implicit in the lease. If such implicit rate cannot be readily determined, the Bank uses the Bank's incremental borrowing rate. The lease liability is subsequently increased by the amount of interest expenses recognized on the lease liability and reduced by the lease payments made.

*Short-term lease and lease of low-value assets*

The Bank does not apply the requirements of lessee accounting to short-term leases and leases of low-value assets. The Bank recognizes the lease payments associated with these leases as expenses on a straight-line basis over the lease term.

**3. Significant Accounting Policies, Continued**

**(15) Impairment of non-financial assets**

The Bank tests for any evidence of impairment in assets and reviews whether the impairment has taken place by estimating the recoverable amount, at the end of each reporting period. The recoverable amount is the higher of the fair value less cost and value in use of an asset.

Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceeds the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years.

**(16) Assets held for sale**

Non-current assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. To be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

The Bank recognizes an impairment loss for any initial or subsequent write-down of an asset (or disposal group) to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized.

Non-current assets that are classified as held for sale or part of a disposal group classified as held for sale are not depreciated (or amortized).

**(17) Non-derivative financial liabilities**

The Bank classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities, in accordance with the substance of the contractual arrangement and the definitions of financial liability. The Bank recognizes these financial liabilities in the statement of financial position when the Bank becomes a party to the contractual provisions of the financial liability.

***(i) Financial liabilities at fair value through profit or loss***

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated at FVTPL upon initial recognition. Financial liabilities and derivatives are classified as financial instruments held for trading if they are acquired for repurchasing soon. Financial liabilities are classified as financial liabilities at FVTPL upon initial recognition, if the profit or loss from the liabilities indicates to be more purpose-appropriate to be recognised as profit or loss. Financial liabilities at FVTPL are designated at fair value in subsequent measurements, and any related un-realized profit or loss is recognised as profit or loss. In addition, for the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability, the Bank present this change in other comprehensive income, and does not recycle this other comprehensive income to profit or loss, subsequently.

***(ii) Financial liabilities measured at amortized cost***

Financial liabilities measured at amortized cost are recognised at fair value less cost less transaction cost upon initial recognition, and subsequently at amortized costs. The difference between the proceeds (net of transaction cost) and the redemption value is recognised in the statement of comprehensive income over the periods of the liabilities using the effective interest method.

Fees paid on the establishment of a loan facility are recognised as transaction costs of the loan, if the probability that some or all the facility will be drawn down is high. If, however, there is not enough evidence to conclude a draw-down of some or all the facility will occur, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facility to which it relates.

3. **Significant Accounting Policies, Continued**

**(18) Employee benefits**

***(i) Short-term employee benefits***

Short-term employee benefits are employee benefits that are due to be settled wholly before 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Bank during an accounting period, the Bank recognises the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

***(ii) Retirement benefits: defined contribution plans***

A defined contribution plan is a pension plan under which the Bank pays fixed contributions into a separate fund. The Bank is no longer responsible for any foreseeable future liability after a certain amount or percentage of money is set aside for defined contribution plans. If the pension plan allows for early retirement, payments are recognised as employee benefits. If the contribution already paid exceeds the contribution due for service before the end of the reporting period, the Bank recognises that excess as an asset to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

***(iii) Retirement benefits: defined benefit plans***

The Bank classifies all the pensions as defined benefit plans except defined contribution plans. The Bank's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets. The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and have terms to maturity like the terms of the related pension liability.

Remeasurements of the net defined benefit liabilities (assets), which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income.

**(19) Provisions**

Provisions are recognized when the Bank has a present legal or constructive obligation because of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

**(20) Financial guarantees**

Financial guarantee contracts are contracts that require the issuer (the Bank) to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due, in accordance with the original or changed terms of a debt instrument. Financial guarantees are initially recognized in the financial statements at fair value on the date the guarantee was given. Subsequent to initial recognition, the Bank's liabilities under such guarantees are measured at the higher of:

- The amount determined in accordance with K-IFRS 1109 'Financial Instruments' and
- The initial amount recognized, less, when appropriate, cumulative amortization recognized in accordance with K-IFRS 1115 'Revenue from Contracts with Customers'.

**3. Significant Accounting Policies, Continued**

**(21) Securities under resale or repurchase agreements**

Securities purchased under agreements to resell are recorded as other loans and receivables and the related interest from these securities is recorded as interest income; securities sold under agreements to repurchase are recorded as other borrowings, and the related interest from these securities is recorded as interest expense.

**(22) Interest income and expense**

Interest income and expense are recognized in profit or loss using the effective interest method. The effective interest method measures the amortized costs of financial instruments and allocates the interest income or expense during the related period.

Upon the calculation of the effective interest rate, the Bank estimates future cash flows by taking into consideration all contractual terms of the financial instrument, but not future credit loss. The calculation also reflects any fees or points paid or received, transaction costs and any related premiums or discounts. In the case that the cash flow and expected duration of a financial instrument cannot be estimated reliably, the effective interest rate is calculated by the contractual cash flow during the contract period.

Once an impairment loss has been recognized on a financial asset or a group of similar assets, subsequent interest income is recognized on the interest rate that was used to discount future cash flow for measuring the impairment loss.

**(23) Fees and commission income**

Fees and commission income and expense are classified as follows according to related regulations:

***(i) Fees and commission from financial instruments***

Fees and commission income and expense that are integral to the effective interest rate on a financial asset or liability are included in the measurement of the effective interest rate. It includes those related to evaluation of the borrowers' financial status, guarantee, collateral, other agreements and related evaluation as well as business transaction, rewards for activities, such as document preparation and recording and setup fees incurred during issuance of financial liabilities. However, when financial instruments are classified as financial instruments at fair value through profit or loss, fees and commission are recognized as revenue upon initial recognition.

***(ii) Fees and commission from services***

Fees and commission income charged in exchange for services to be performed during a certain period of time such as asset management fees, consignment fees and assurance service fees are recognized as the related services are performed. When a loan commitment is not expected to result in the draw-down of a loan and K-IFRS 1039 '*Financial Instrument: Recognition and Measurement*' is not applied for the commitment, the related loan commitment fees are recognized as revenue proportionally to time over the commitment period.

***(iii) Fees and commission from significant transaction***

Fees and commission from significant transactions, such as trading stocks and other securities, negotiation and mediation activities for third parties, for instance business transfer and takeover, are recognized when transactions are completed.

**(24) Dividend income**

Dividend income is recognized upon the establishment of the Bank's right to receive the payment.

**3. Significant Accounting Policies, Continued**

**(25) Income tax expense**

Income tax expense comprises current and deferred income tax. Current income tax and deferred income tax are recognized in profit or loss except to the extent that the tax arises from a transaction or event, which is recognized in other comprehensive income or directly in equity, or a business combination.

The Bank recognizes deferred income tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates, except to the extent that the Bank can control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Bank recognizes deferred income tax assets for all deductible temporary differences arising from investments in associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the reporting period when the assets are realized, or the liabilities settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred income tax assets and liabilities reflects the income tax effects that would follow from the manner in which the Bank expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

The carrying amount of a deferred income tax asset is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred income tax asset to be utilized.

Deferred income tax assets and liabilities are off-set only if the Bank has a legally enforceable right to off-set the related current income tax assets and liabilities, and the assets and liabilities relate to income tax levied by the same tax authority and are intended to be settled on a net basis.

**(26) Accounting for trust accounts**

The Bank, for financial reporting, differentiates trust assets from identifiable assets according to the *Financial Investment Services and Capital Markets Act*. Furthermore, the Bank receives trust fees from the application, management and disposal of trust assets, and appropriates such amounts for fees from trust accounts.

Meanwhile, in the case the fee from an unspecified principal or interests guaranteed money in trust does not meet the principal or interest amount, even after appropriating deficit with trust fees and special reserve, the Bank fills in the remaining deficit in the trust account and appropriates such amounts for losses on trust accounts.

**(27) Regulatory reserve for credit losses**

When the total sum of allowance for possible credit losses is lower than the amount prescribed in Article 29(1) of the *Regulations on Supervision of Banking Business*, the Bank records the difference as regulatory reserve for credit losses at the end of each reporting period.

In the case that the existing regulatory reserve for credit losses exceeds the amount needed to be set aside at the reporting date, the surplus may be reversed. Furthermore, in the case that undisposed deficit exists, regulatory reserve for credit losses is saved from the time the undisposed deficit is disposed.

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**3. Significant Accounting Policies, Continued**

**(28) Earnings per share**

The Bank represents its diluted and basic earnings per common share in the separate statement of comprehensive income. Basic earnings per share (EPS) is calculated by dividing net profit attributable to shareholders of the Bank by the weighted average number of common shares outstanding during the reporting period. Diluted earnings per share is calculated by adjusting net profit attributable to common shareholders of the Bank, considering dilution effects from all potential common shares, and the weighted average number of common shares outstanding.

**(29) Corrections of errors**

Prior period errors shall be corrected by retrospective restatement in the first set of financial statements authorised for issue after their discovery except to the extent that it is impracticable to determine either the period-specific effects or the cumulative effect of the error.

**4. Cash and Due from Banks**

(1) Cash and due from banks as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Cash	₩ 70,525	55,083
Due from banks in Korean won:		
Due from Bank of Korea	3,360,908	5,673,412
Other due from banks in Korean won	570,295	334,272
	<u>3,931,203</u>	<u>6,007,684</u>
Due from banks in foreign currencies / off-shores	7,537,078	5,913,000
	₩ <u>11,538,806</u>	<u>11,975,767</u>

(2) Restricted due from banks as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Reserve deposit	₩ 1,181,823	4,387,441
Deposit of monetary stabilization account	2,470,000	1,500,000
Others	405,682	518,886
	₩ <u>4,057,505</u>	<u>6,406,327</u>

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5. Securities Measured at FVTPL

(1) Details of securities in financial assets at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
		Face value	Fair value (Carrying amounts)
<b>December 31, 2022</b>			
Securities denominated in Korean won:			
Stocks	₩	-	1,666,930
Equity investments		-	839,331
Beneficiary certificates		-	7,665,755
Government and public bonds		648,000	623,264
Financial bonds		403,000	401,127
Others		10,470	10,392
		<u>1,061,470</u>	<u>11,206,799</u>
Securities denominated in foreign currencies/off-shores:			
Stocks		-	13,784
Equity investments		-	109,011
Beneficiary certificates		-	622,312
Debt securities		-	-
		<u>-</u>	<u>745,107</u>
₩		<u>1,061,470</u>	<u>11,951,906</u>
<b>December 31, 2021</b>			
		Face value	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks	₩	-	884,330
Equity investments		-	490,230
Beneficiary certificates		-	6,835,319
Government and public bonds		632,000	606,007
Financial bonds		165,000	163,787
Others		50,470	50,436
		<u>847,470</u>	<u>9,030,109</u>
Securities denominated in foreign currencies/off-shores:			
Equity investments		-	62,286
Beneficiary certificates		-	673,050
Debt securities		53,348	53,366
		<u>53,348</u>	<u>788,702</u>
₩		<u>900,818</u>	<u>9,818,811</u>

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**5. Securities Measured at FVTPL, Continued**

(2) Equity securities with disposal restrictions in financial assets at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
Company	Number of shares	Carrying amount	Restricted period
National Happiness Fund	34,066 ₩	28,873	Undecided
<b>December 31, 2021</b>			
Company	Number of shares	Carrying amount	Restricted period
National Happiness Fund	34,066 ₩	47,647	Undecided
Shinhan Metal Co., Ltd.	7,692	-	Until December 31, 2022
	<u>41,758 ₩</u>	<u>47,647</u>	

**6. Securities Measured at FVOCI**

(1) Details of securities measured at FVOCI as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks and equity investments	₩ -	10,857,462	11,145,371
Government and public bonds	2,345,000	2,325,251	2,283,060
Financial bonds	2,690,000	2,673,516	2,657,525
Corporate bonds	7,086,079	7,083,618	6,781,202
Others	1,828,729	1,828,729	5,723,053
	<u>13,949,808</u>	<u>24,768,576</u>	<u>28,590,211</u>
Securities denominated in foreign currencies/off-shores:			
Equity securities	-	495	1,631
Debt securities	9,808,493	9,976,279	9,093,077
	<u>9,808,493</u>	<u>9,976,774</u>	<u>9,094,708</u>
Loaned securities:			
Debt securities	-	-	-
	<u>₩ 23,758,301</u>	<u>34,745,350</u>	<u>37,684,919</u>

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6. Securities Measured at FVOCI, Continued

		December 31, 2021	
		Face value	Fair value (Carrying amounts)
Securities denominated in Korean won:		Acquisition cost	
Stocks and equity investments	₩	-	10,473,759
Government and public bonds		10,202,849	1,157,222
Financial bonds		1,158,713	1,817,298
Corporate bonds		1,820,000	8,343,980
Others		8,444,966	8,399,919
		2,137,849	30,192,178
		13,562,815	
Securities denominated in foreign currencies/off-shores:			
Equity securities		7,594	6,955
Debt securities		7,179,340	7,258,363
		7,179,340	7,265,318
Loaned securities:			
Debt securities		420,000	417,640
	₩	21,162,155	37,875,136
		31,582,674	

Equity instruments that are acquired due to debt-to-equity swap, investment in kind and investment in ventures and small and medium-sized enterprises are designated as measured at FVOCI. The realized pre-tax income and loss on disposal of equity securities for the years ended December 31, 2022 and 2021 are the amount of ₩312,364 million of gain and ₩60,102 million of gain, respectively, which is directly recognized in retained earnings.

(2) Changes in securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

	2022	2021
Beginning balance	₩ 37,875,136	34,141,325
Acquisition	14,683,389	36,914,523
Disposal	(12,076,298)	(37,413,898)
Change due to amortization	(5,575)	(46,622)
Change in fair value	(3,318,776)	3,559,286
Reclassification	19,125	-
Foreign exchange differences	494,413	574,339
Others (*)	13,505	146,183
Ending balance	₩ 37,684,919	37,875,136

(\*) For the year ended December 31, 2022, others represent the increase in securities measured at FVOCI including shares of FADU Inc., TETOS Co., Ltd. and others acquired through exercise of conversion rights of the convertible bonds and shares of Boowon Industry Co., Ltd., ENTECHNOLOGIES Co., Ltd. and others acquired in accordance with the rehabilitation plan under the Debtor Rehabilitation and Bankruptcy Act. For the year ended December 31, 2021, others represent the increase in securities measured at FVOCI including shares of DAE SUN SHIPBUILDING & ENGINEERING CO., LTD., HEUNG-A SHIPPING CO., LTD. and others acquired in accordance with the workout plan decided by the Council of Financial Creditors, shares of Woongjin Energy Co., Ltd. and others acquired in accordance with the rehabilitation plan under the Debtor Rehabilitation and Bankruptcy Act. and shares of L&F CO., LTD., NKMAX Co., Ltd., KASA NETWORK PTE. LTD. and others acquired through exercise of conversion rights of the convertible bonds.

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6. **Securities Measured at FVOCI, Continued**

(3) Equity securities with disposal restrictions in securities measured at FVOCI as of December 31, 2022 and 2021 are as follows:

Company (*1)	December 31, 2022		
	Number of shares	Carrying amount	Restricted period
UAMCO., Ltd.	113,050 ₩	188,721	Undecided
High Gain Antenna Co., Ltd.	18,138	270	Undecided
Kumho Tire Co., Inc.	21,339,320	71,167	Until July 6, 2023 (*2)
Daehan Shipbuilding Co., Ltd.	231,459	2,871	Until August 31, 2023
	<u>21,701,967 ₩</u>	<u>263,029</u>	

(\*1) The Bank sold all of its shares in HEUNG-A SHIPPING CO., LTD. and K Shipbuilding Co., Ltd. for the year ended December 31, 2022.

(\*2) From July 6, 2021, 50% of the shares may be sold every year.

Company	December 31, 2021		
	Number of shares	Carrying amount	Restricted period
UAMCO., Ltd.	113,050 ₩	176,628	Undecided
High Gain Antenna Co., Ltd.	18,138	273	Undecided
DNGV., Co. Ltd. (*2)	500,000	1	Undecided
HEUNG-A SHIPPING CO., LTD.	3,019,800	8,153	Until July 11, 2022
K Shipbuilding Co., Ltd.	1,115,242	1,258	Until August 3, 2022
WOOJEON CO., LTD.	591,118	1	Until November 12, 2022
Kumho Tire Co., Inc.	21,339,320	98,374	Until July 6, 2023 (*)
POSCO Plantec Co., Ltd.	1,838,744	1,806	Until December 31, 2023 or listing date
	<u>28,535,412 ₩</u>	<u>286,494</u>	

(\*) From July 6, 2021, 50% of the shares may be sold every year.

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6. Securities Measured at FVOCI, Continued

(4) Changes in the loss allowance in relation to securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
		<u>Lifetime expected credit loss</u>		
	12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩ 11,661	3,120	71,668	86,449
Transfer to 12-month expected credit loss	157	(157)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired debt securities	(1,127)	1,127	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for loss allowance	(1,511)	532	(139)	(1,118)
Disposal	(642)	-	-	(642)
Foreign currency translation, etc.	2,503	(2,224)	1,211	1,490
Ending balance	₩ 11,041	2,398	72,740	86,179

<b>2021</b>				
		<u>Lifetime expected credit loss</u>		
	12-month expected credit loss	Non credit- Impaired	Credit- impaired	Total
Beginning balance	₩ 9,671	1,209	70,398	81,278
Transfer to 12-month expected credit loss	400	(400)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired debt securities	(1,786)	1,786	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for loss allowance	2,472	1,469	822	4,763
Disposal	(423)	-	-	(423)
Foreign currency translation, etc.	1,327	(944)	448	831
Ending balance	₩ 11,661	3,120	71,668	86,449

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**7. Securities Measured at Amortized Cost**

(1) Securities measured at amortized cost as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	
		<u>Amortized cost</u>	<u>Fair value</u>
Securities denominated in Korean won:			
Government and public bonds	₩	2,964,285	2,964,285
Financial bonds		2,961,887	2,961,788
Corporate bonds		429,921	429,811
		<u>6,356,093</u>	<u>6,355,884</u>
Less: loss allowance		(209)	
	₩	<u>6,355,884</u>	<u>6,355,884</u>
		<b>December 31, 2021</b>	
		<u>Amortized cost</u>	<u>Fair value</u>
Securities denominated in Korean won:			
Government and public bonds	₩	1,437,496	1,437,496
Financial bonds		1,079,249	1,079,204
Corporate bonds		452,290	452,177
		<u>2,969,035</u>	<u>2,968,877</u>
Less: loss allowance		(158)	
	₩	<u>2,968,877</u>	<u>2,968,877</u>

(2) Changes in securities measured at amortized cost for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Beginning balance	₩	2,968,877	785,264
Acquisition		4,895,925	2,888,991
Redemption		(1,522,000)	(700,000)
Change due to amortization		13,132	(5,229)
Impairment loss		(50)	(149)
Ending balance	₩	<u>6,355,884</u>	<u>2,968,877</u>

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**8. Loans Measured at FVTPL**

(1) Loans measured at FVTPL as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>		<b>December 31, 2021</b>	
		<u>Amortized cost</u>	<u>Fair value (Carrying amounts)</u>	<u>Amortized cost</u>	<u>Fair value (Carrying amounts)</u>
Loans in Korean won:					
Privately placed corporate bonds	₩	459,064	541,811	471,645	644,412

(2) Gains (losses) related to loans measured at FVTPL for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Transaction gains (losses) on loans measured at FVTPL			
Transaction gains	₩	8,100	1,860,411
Transaction losses		(8,709)	(9,692)
		(609)	1,850,719
Valuation gains (losses) on loans measured at FVTPL			
Valuation gains		9,294	83,760
Valuation losses		(88,248)	(4,349)
		(78,954)	79,411
	₩	(79,563)	1,930,130

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9. **Loans Measured at Amortized Cost**

(1) Loans measured at amortized cost and loss allowance for loan as of December 31, 2022 and 2021 are as follows:

	December 31, 2022		December 31, 2021	
	Amortized cost	Fair value	Amortized cost	Fair value
Loans in Korean won:				
Loans for working capital	₩ 69,723,242	68,263,234	64,913,903	63,346,107
Loans for facility development	60,391,588	58,443,101	56,414,412	55,263,451
Loans for households	183,676	175,347	206,579	204,895
Inter-bank loans	3,037,471	2,746,516	2,827,972	2,639,400
	<u>133,335,977</u>	<u>129,628,198</u>	<u>124,362,866</u>	<u>121,453,853</u>
Loans in foreign currencies:				
Loans	27,770,598	27,462,025	22,276,205	21,974,270
Inter-bank loans	4,296,005	4,281,978	2,391,409	2,390,650
Off-shore loans	20,961,290	20,421,515	16,990,941	16,581,263
	<u>53,027,893</u>	<u>52,165,518</u>	<u>41,658,555</u>	<u>40,946,183</u>
Other loans:				
Bills bought in foreign currency	2,275,189	2,252,927	2,581,399	2,579,637
Advances for customers on acceptances and guarantees	8,954	1,286	17,416	7,068
Privately placed corporate bonds	2,227,012	2,191,115	1,039,406	1,022,432
Others	11,157,205	11,000,638	5,257,538	5,130,169
	<u>15,668,360</u>	<u>15,445,966</u>	<u>8,895,759</u>	<u>8,739,306</u>
	<u>202,032,230</u>	<u>197,239,682</u>	<u>174,917,180</u>	<u>171,139,342</u>
Less:				
Loss allowance for loan	(3,997,231)		(4,154,330)	
Present value discount	(10,620)		(15,881)	
Deferred loan origination costs and fees	21,224		16,425	
	<u>₩ 198,045,603</u>		<u>170,763,394</u>	

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9. Loans Measured at Amortized Cost, Continued

(2) Changes in loss allowance for loan for the years ended December 31, 2022 and 2021 are as follows:

	2022				
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	342,959	2,242,499	1,568,872	4,154,330
Transfer to 12-month expected credit loss		23,391	(12,442)	(10,949)	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired loans		(184,211)	206,209	(21,998)	-
Transfer to credit-impaired loans		(71,631)	(198,640)	270,271	-
Provision for (reversal of) loss allowance		177,224	95,349	137,877	410,450
Write-offs		-	-	(85,067)	(85,067)
Recovery		-	-	20,783	20,783
Sale		-	-	(148,285)	(148,285)
Debt-to-equity swap		-	-	(355,903)	(355,903)
Foreign currency translation		2,941	41,538	12,165	56,644
Other		(1,419)	(33,677)	(20,625)	(55,721)
Ending balance	₩	289,254	2,340,836	1,367,141	3,997,231

	2021				
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	640,094	1,398,461	1,737,936	3,776,491
Transfer to 12-month expected credit loss		629	(629)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired loans		(2,108,521)	2,108,521	-	-
Transfer to credit-impaired loans		(1,400,818)	(3,526)	1,404,344	-
Provision for (reversal of) loss allowance		3,235,702	(1,312,045)	(1,068,109)	855,548
Write-offs		-	-	(33,671)	(33,671)
Recovery		-	-	57,778	57,778
Sale		-	-	(195,397)	(195,397)
Debt-to-equity swap		-	-	(402,680)	(402,680)
Foreign currency translation		15,036	7,947	39,620	62,603
Other		(39,163)	43,770	29,051	33,658
Ending balance	₩	342,959	2,242,499	1,568,872	4,154,330

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**9. Loans Measured at Amortized Cost, Continued**

(3) Gains (losses) related to loans measured at amortized cost for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Provision for allowance for loan losses	₩ (410,450)	(855,548)
Gains on disposal of loan	27,820	32,025
	₩ <u>(382,630)</u>	<u>(823,523)</u>

(4) Changes in net deferred loan origination costs and fees for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 16,425	9,003
New deferrals	18,817	21,189
Amortization	(14,018)	(13,767)
Ending balance	₩ <u>21,224</u>	<u>16,425</u>

**10. Derivative Financial Instruments**

The Bank's derivative financial instruments consist of trading derivatives and hedging derivatives, depending on the nature of each transaction. The Bank enters into hedging derivative transactions mainly for the purpose of hedging risk related to changes in fair values of the underlying assets and liabilities and future cash flows.

The Bank enters into trading derivative transactions such as futures, forwards, swaps and options for arbitrage transactions by speculating on the future value of the underlying asset. Derivatives held-for trading transactions include contracts with the Bank's clients and its liquidation position.

For the purpose of hedging the exposure to the variability of fair values and cash flows of funds in Korean won by changes in interest rate, the Bank mainly uses interest swaps or currency swaps. The main counterparties are foreign financial institutions and local banks. In addition, to hedge the exposure to the variability of fair values of bonds in foreign currencies by changes in interest rate or foreign exchange rate, the Bank mainly uses interest swaps or currency swaps.

The Bank applies net investment hedge accounting by designating non-derivative financial instruments as hedging instruments and any gain or loss on the hedging instruments relating to the effective portion of the hedge is recognised in other comprehensive income and accumulated in the foreign currency translation reserve.

Gains and losses on the hedging instrument accumulated in the foreign currency translation reserve are reclassified to profit or loss on the disposal or partial disposal of the foreign operation.

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**10. Derivative Financial Instruments, Continued**

- (1) The notional amounts outstanding for derivative contracts and the carrying amounts of the derivative financial instruments as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>			
		Notional amounts		Carrying amounts	
		Buy	Sell	Asset	Liability
Trading purpose derivative financial instruments:					
Interest rate					
Futures	₩	-	1,232,323	-	-
Forwards		-	50,000	1,384	-
Swaps		294,150,122	294,150,122	1,573,784	2,088,963
Options		7,881,911	14,728,387	473,586	536,364
		<u>302,032,033</u>	<u>310,160,832</u>	<u>2,048,754</u>	<u>2,625,327</u>
Currency					
Forwards		50,944,418	37,554,484	2,432,523	1,307,942
Swaps		58,740,494	74,899,023	5,225,899	6,174,071
Options		330,066	329,052	1,991	6,452
		<u>110,014,978</u>	<u>112,782,559</u>	<u>7,660,413</u>	<u>7,488,465</u>
Stock					
Options		48,904	493,689	12,762	6,003
Allowance and other adjustments		-	-	(112,903)	(1,447)
		<u>412,095,915</u>	<u>423,437,080</u>	<u>9,609,026</u>	<u>10,118,348</u>
Hedging purpose derivative financial instruments:					
Interest rate (*)					
Swaps		31,141,774	31,141,774	48,881	542,268
Currency					
Swaps		10,217,257	10,417,222	136,596	660,189
Allowance and other adjustments		-	-	(48)	(3,803)
		<u>41,359,031</u>	<u>41,558,996</u>	<u>185,429</u>	<u>1,198,654</u>
	₩	<u>453,454,946</u>	<u>464,996,076</u>	<u>9,794,455</u>	<u>11,317,002</u>

- (\*) The expected maximum period for which derivative contracts, applied the cash flow hedge accounting, are exposed to risk of cash flow fluctuation is until April 29, 2025.

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10. Derivative Financial Instruments, Continued

		December 31, 2021			
		Notional amounts		Carrying amounts	
		Buy	Sell	Asset	Liability
Trading purpose derivative financial instruments:					
Interest rate					
Futures	₩	-	702,640	-	-
Swaps		244,579,384	244,578,686	864,321	488,956
Options		8,369,912	14,664,094	305,022	377,850
		252,949,296	259,945,420	1,169,343	866,806
Currency					
Futures		17,783	-	-	-
Forwards		68,100,960	53,060,246	1,771,579	1,134,731
Swaps		57,834,161	70,349,339	1,919,679	2,499,896
Options		377,494	375,834	889	578
		126,330,398	123,785,419	3,692,147	3,635,205
Stock					
Options		53,753	50,736	10,068	221
Allowance and other adjustments		-	-	(94,686)	(854)
		379,333,447	383,781,575	4,776,872	4,501,378
Hedging purpose derivative financial instruments:					
Interest rate (*)					
Swaps		23,795,059	23,795,059	330,758	45,989
Currency					
Swaps		9,073,004	9,076,498	198,077	214,502
Allowance and other adjustments		-	-	(135)	(4,028)
		32,868,063	32,871,557	528,700	256,463
	₩	412,201,510	416,653,132	5,305,572	4,757,841

(\*) The expected maximum period for which derivative contracts, applied the cash flow hedge accounting, are exposed to risk of cash flow fluctuation is until April 29, 2025.

(2) The notional amounts outstanding for the hedging instruments by period as of December 31, 2022 and 2021 are as follows:

		December 31, 2022					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Interest rate:							
Notional amounts outstanding	₩	-	1,629,878	4,135,405	20,411,219	4,965,272	31,141,774
Currency:							
Notional amounts outstanding	₩	310,198	175,155	2,851,071	5,790,132	1,090,701	10,217,257
		December 31, 2021					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Interest rate:							
Notional amounts outstanding	₩	224,896	1,271,477	1,279,617	17,395,158	3,623,911	23,795,059
Currency:							
Notional amounts outstanding	₩	-	17,178	2,412,941	5,159,516	1,483,369	9,073,004

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10. **Derivative Financial Instruments, Continued**

(3) Details of the balances of the hedging instruments by risk type as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>					
	Notional amounts		Balances		Changes in fair value for 2022
	Buy	Sell	Assets	Liabilities	
Cash flow hedge accounting:					
Interest rate risk:					
Swaps	₩ 88,711	88,711	-	-	5,044
Fair value hedge accounting:					
Interest rate risk:					
Swaps	31,053,063	31,053,063	48,881	542,268	(1,570,665)
Currency risk					
Swaps	10,217,257	10,417,222	136,596	660,189	(610,843)
	41,270,320	41,470,285	185,477	1,202,457	(2,181,508)
₩	41,359,031	41,558,996	185,477	1,202,457	(2,176,464)
<b>December 31, 2021</b>					
	Notional amounts		Balances		Changes in fair value for 2021
	Buy	Sell	Assets	Liabilities	
Cash flow hedge accounting:					
Interest rate risk:					
Swaps	₩ 82,985	82,985	-	-	2,035
Fair value hedge accounting:					
Interest rate risk:					
Swaps	23,712,074	23,712,074	330,758	45,989	(599,697)
Currency risk:					
Swaps	9,073,004	9,076,498	198,077	214,502	(494,535)
	32,785,078	32,788,572	528,835	260,491	(1,094,232)
₩	32,868,063	32,871,557	528,835	260,491	(1,092,197)

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10. **Derivative Financial Instruments, Continued**

(4) Details of the balances of the hedged items by risk type as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>					
		<u>Carrying amounts</u>		<u>Change in value of the hedged item</u>		<u>Changes in fair value for 2022</u>	<u>Cash flow hedge reserve</u>
		<u>Assets</u>	<u>Liabilities</u>	<u>Assets</u>	<u>Liabilities</u>		
Cash flow hedge accounting:							
Interest rate risk:							
Debt debentures	₩	-	88,711	-	-	-	7,240
Fair value hedge accounting:							
Interest rate risk:							
Securities measured at FVOCI		3,932,336	-	(314,591)	-	(313,189)	-
Debt debentures		-	25,497,582	-	(1,900,489)	1,890,055	-
Other liabilities (Deposits, etc.)		-	107,660	-	(19,070)	22,323	-
		<u>3,932,336</u>	<u>25,605,242</u>	<u>(314,591)</u>	<u>(1,919,559)</u>	<u>1,599,189</u>	<u>-</u>
Currency risk:							
Debt debentures		-	9,816,395	-	(89,179)	611,221	-
		<u>3,932,336</u>	<u>35,421,637</u>	<u>(314,591)</u>	<u>(2,008,738)</u>	<u>2,210,410</u>	<u>-</u>
₩		<u>3,932,336</u>	<u>35,510,348</u>	<u>(314,591)</u>	<u>(2,008,738)</u>	<u>2,210,410</u>	<u>7,240</u>
		<b>December 31, 2021</b>					
		<u>Carrying amounts</u>		<u>Change in value of the hedged item</u>		<u>Changes in fair value for 2021</u>	<u>Cash flow hedge reserve</u>
		<u>Assets</u>	<u>Liabilities</u>	<u>Assets</u>	<u>Liabilities</u>		
Cash flow hedge accounting:							
Interest rate risk:							
Debt debentures	₩	-	82,985	-	-	-	1,930
Fair value hedge accounting:							
Interest rate risk:							
Securities measured at FVOCI		2,779,027	-	(125,411)	-	(52,225)	-
Debt debentures		-	21,621,572	-	(2,068)	643,184	-
Other liabilities (Deposits, etc.)		-	121,593	-	3,043	9,589	-
		<u>2,779,027</u>	<u>21,743,165</u>	<u>(125,411)</u>	<u>975</u>	<u>600,548</u>	<u>-</u>
Currency risk:							
Debt debentures		-	9,012,029	-	170,860	504,818	-
		<u>2,779,027</u>	<u>30,755,194</u>	<u>(125,411)</u>	<u>171,835</u>	<u>1,105,366</u>	<u>-</u>
₩		<u>2,779,027</u>	<u>30,838,179</u>	<u>(125,411)</u>	<u>171,835</u>	<u>1,105,366</u>	<u>1,930</u>

(5) Details of hedge ineffectiveness recognized in profit or loss from derivatives for the years ended December 31, 2022 and 2021 is as follows:

	<b>2022</b>	<b>2021</b>
Interest rate risk	₩ 28,524	851
Currency risk	378	10,283
₩	<u>28,902</u>	<u>11,134</u>

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**10. Derivative Financial Instruments, Continued**

(6) The summary of the amounts that have affected the statement of comprehensive income as a result of applying cash flow hedge accounting for the years ended December 31, 2022 and 2021 is as follows:

<b>2022</b>			
	Change in the value of the hedging instrument recognized in other comprehensive income	Hedge ineffectiveness recognized in profit or loss (*)	Amount reclassified from other comprehensive income to profit or loss (*)
Interest rate risk	₩ 5,311	(267)	-

(\*) Recognized in gains or losses related to hedging purpose derivatives.

<b>2021</b>			
	Change in the value of the hedging instrument recognized in other comprehensive income	Hedge ineffectiveness recognized in profit or loss (*)	Amount reclassified from other comprehensive income to profit or loss (*)
Interest rate risk	₩ 1,883	152	-

(\*) Recognized in gains or losses related to hedging purpose derivatives.

(7) Details of net investments in foreign operations for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>			
	Changes in fair value	Other comprehensive income for hedges of net investments in foreign operations	
Currency (foreign exchange risk)	₩ 67,754	(96,874)	

<b>2021</b>			
	Changes in fair value	Other comprehensive income for hedges of net investments in foreign operations	
Currency (foreign exchange risk)	₩ 78,095	(29,120)	

(8) Details of hedging instruments in hedge of net investments in foreign operations as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
	Carrying amount	Changes in fair value for 2022	Change in the value of the hedging instrument recognized in other comprehensive income for 2022	Hedge ineffectiveness recognized in profit or loss for 2022
Debentures in foreign currencies	₩ 1,097,225	(67,754)	(67,754)	-

<b>December 31, 2021</b>				
	Carrying amount	Changes in fair value for 2021	Change in the value of the hedging instrument recognized in other comprehensive income for 2021	Hedge ineffectiveness recognized in profit or loss for 2021
Debentures in foreign currencies	₩ 1,006,263	(78,095)	(78,095)	-

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**11. Investments in Subsidiaries and Associates**

(1) Investments in subsidiaries and associates as of December 31, 2022 and 2021 are as follows:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Subsidiaries:		
KDB Asia Ltd.	₩ 332,907	332,907
KDB Bank Europe Ltd. (*1)	125,452	137,452
KDB Ireland Ltd.	62,389	62,389
KDB Bank Uzbekistan Ltd.	47,937	47,937
Banco KDB Do Brazil S.A. (*2)	39,761	36,234
PT KDB Tifa Finance Tbk	85,288	85,288
KDB Silicon Valley LLC	118,615	118,615
KDB OCCASIO II, L.P.	22,096	-
KDB Synergy, L.P.	19,872	-
KDB Investment Co., Ltd.	70,000	70,000
KDB Biz Co., Ltd.	1,500	1,500
KDB Capital Corporation	597,290	597,290
Daewoo Shipbuilding & Marine Engineering Co., Ltd. (*3)	1,129,769	-
Daehan Shipbuilding Co., Ltd. (*4)	-	-
Korea BTL Financing 1	129,136	142,782
Korea Railroad Financing 1	78,715	84,553
Korea Education Financing	40,697	45,553
KDB Infrastructure Investment Asset Management Co., Ltd.	16,843	16,843
KDB Investment PEF No.1 (*5)	-	1,448,893
KDB Consus Value PEF (*6)	170,462	157,388
KDB-IAP OBOR PEF (*7)	-	-
Green Initiative 2nd Private Equity Fund	72,987	-
KDBC Co-investment Private Equity Fund	12,627	-
KDB Asia PEF	84,112	62,597
KDB Small Medium Mezzanine PEF	44,350	49,540
Corporate Liquidity Assistance Agency Co., Ltd.	1,000,000	1,000,000
	<u>4,302,805</u>	<u>4,497,761</u>
Associates:		
Korea Electric Power Co., Ltd.	16,921,067	16,921,067
Korea Tourism Organization	337,286	337,286
Korea Infrastructure Financing 2 Co.	212,808	212,991
Korea Ocean Business Corporation	631,777	631,777
Korea Real Estate Board	58,492	58,492
HMM Co., Ltd. (*8)	1,974,499	2,736,835
GM Korea Company (*9)	376,454	382,736
HANJIN KAL (*10)	352,761	500,000
Korean Air Lines Co., Ltd.	330,477	-
Shinbundang Railroad Co., Ltd. (*11)	-	30,999
Troika Resources Investment PEF (*12)	-	2,304
Others (*13)	2,493,905	2,397,814
	<u>23,689,526</u>	<u>24,212,301</u>
₩	<u>27,992,331</u>	<u>28,710,062</u>

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**11. Investments in Subsidiaries and Associates, Continued**

- (\*1) The Bank recognized impairment losses amounting to ₩11,999 million and ₩7,207 million for the years ended December 31, 2022 and 2021, respectively, due to a decrease in value in use resulting from the decline in expected cash flows from the shares held by the Bank.
- (\*2) The Bank recognized reversal of impairment losses amounting to ₩3,527 million and ₩4,965 million for the years ended December 31, 2022 and 2021, respectively, due to an increase in value in use resulting from the enhancement of expected cash flows from the shares held by the Bank.
- (\*3) The Bank and Hyundai Heavy Industries Co., Ltd. (“Hyundai Heavy Industries”) made the investment contract (hereinafter, “the contract”) with an investment in kind on March 8, 2019. For the year ended December 31, 2022, the European Commission did not approve the merger between Korea Shipbuilding & Marine Engineering Co., Ltd. and Daewoo Shipbuilding & Marine Engineering on January 13, 2022. As a result of the disapproval, the contract’s precondition including governmental permission of different countries was not satisfied and the Bank and Korea Shipbuilding & Marine Engineering Co., Ltd. cancelled this contract on March 8, 2022. The Bank’s shares of Daewoo Shipbuilding & Marine Engineering Co., Ltd. were transferred from assets held for sale to investments in subsidiaries and the Bank recognized ₩241,283 million of impairment losses considering a decrease in the recoverable value due to a decline in the fair value of the shares.
- (\*4) On May 20, 2022, Daehan Shipbuilding Co., Ltd. (“Daehan Shipbuilding”) and KHI consortium entered into an investment contract (hereinafter, “the contract”) to increase the paid-in capital for the purpose of allowing KHI consortium to acquire the status of a major shareholder of Daehan Shipbuilding. In order to facilitate the smooth transfer of the major shareholder status from the Bank to KHI consortium, the Bank converted the equity of Daehan Shipbuilding for the year ended December 31, 2022. KHI consortium completed payment for the shares on August 31, 2022, and Daehan Shipbuilding was subsequently excluded from the Bank’s subsidiaries.
- (\*5) For the year ended December 31, 2022, the sale of Daewoo Engineering & Construction Co., Ltd., the Bank’s sub-subsidiary, was completed and the carrying amount of KDB Investment PEF No.1 decreased through reduction of paid-in capital. The Bank recognized a reversal of impairment losses amounting to ₩444,642 million for the year ended December 31, 2021 based on the expected cash flows to be received through the disposal of Daewoo Engineering & Construction Co., Ltd.
- (\*6) The Bank recognized a reversal of impairment losses amounting to ₩13,047 million due to an increase in value in use resulting from the enhancement of expected cash flows from the shares held by the Bank for the year ended December 31, 2022. However, the Bank recognized a impairment losses amounting to ₩372 million for the year ended December 31, 2021. In April 2022, the Bank cancelled the agreement of purchase and sale of shares with JC Partners due to the expiration of the transaction closing date.
- (\*7) The Bank recognized impairment losses amounting to ₩6,086 million for the year ended December 31, 2021, due to a decline in net asset values resulting from a decrease in fair value of assets held as objective evidence of impairment.
- (\*8) The Bank recognized impairment losses amounting to ₩762,335 million for the year ended December 31, 2022, due to a decrease in recoverable amount resulting from the decrease in expected cash flow from the shares held by the Bank.
- (\*9) For the years ended December 31, 2022 and 2021, the Bank recognized impairment losses amounting to ₩6,281 million and ₩54,194 million due to a decrease in value in use resulting from the deterioration of operating cash flows.
- (\*10) For the year ended December 31, 2022, the Bank recognized impairment losses amounting to ₩147,239 million due to a decrease in value in use resulting from the deterioration of operating cash flows.
- (\*11) For the year ended December 31, 2022, Shinbundang Railroad Co., Ltd. was excluded from the Bank’s associates due to the loss of significant influence.
- (\*12) The Bank recognized a reversal of impairment losses amounting to ₩93 million for the year ended December 31, 2022, due to an increase in recoverable amount resulting from the enhancement of expected cash flows from the shares held by the Bank. However, the Bank recognized a impairment losses amounting to ₩32 million for the year ended December 31, 2021. Troika Resources Investment PEF was liquidated for the year ended December 31, 2022.
- (\*13) The Bank recognized impairment losses amounting to ₩ 16,174 million for AJU PRIVATE EQUITY FUND NO.2 and 14 other companies for the year ended December 31, 2022. The Bank recognized impairment losses amounting to ₩16,461 million for AJU PRIVATE EQUITY FUND NO.2 and 19 other companies for the year ended December 31, 2021.

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**11. Investments in Subsidiaries and Associates, Continued**

- (2) The market value of marketable investments in subsidiaries and associates as of December 31, 2022 and 2021 are as follows:

		<b>Market value</b>		<b>Carrying amounts</b>	
		<b>December 31, 2022</b>	<b>December 31, 2021</b>	<b>December 31, 2021</b>	<b>December 31, 2021</b>
Korea Electric Power Co., Ltd.	₩	4,604,929	4,668,299	16,921,067	16,921,067
HMM Co., Ltd.		1,978,446	2,722,261	1,974,499	2,736,835
HANJIN KAL		264,477	433,616	352,761	500,000
Korean Air Lines Co., Ltd.		280,906	-	330,477	-
KG Dongbu Steel Co., Ltd. (*)		-	15,966	-	9,268
Daewoo Shipbuilding & Marine Engineering Co., Ltd.		1,132,039	-	1,129,769	-

- (\*) KG Dongbu Steel Co., Ltd. is excluded from the Bank's subsidiaries due to the disposal of shares for the year ended December 31, 2022.

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**11. Investments in Subsidiaries and Associates, Continued**

(3) The key financial information of subsidiaries and associates invested and ownership ratios as of December 31, 2022 and 2021 are as follows:

	December 31, 2022										
									Total compre- hensive income (loss)	Owner- ship (%)	
	Country	Fiscal year end	Industry		Assets	Liabilities	Equity	Operating revenue	Net income (loss)		
Subsidiaries:											
KDB Asia (HK) Ltd.	Hong Kong	December	Finance	₩	3,660,944	3,029,336	631,608	218,171	53,881	75,373	100.00
KDB Bank Europe Ltd.	Hungary	December	Finance		1,197,124	1,082,057	115,067	101,071	7,415	(4,360)	100.00
KDB Ireland Ltd.	Ireland	December	Finance		985,414	861,265	124,149	54,874	7,036	11,258	100.00
KDB Bank Uzbekistan Ltd.	Uzbekistan	December	Finance		981,301	874,872	106,429	55,269	25,765	23,614	86.32
Banco KDB Do Brazil S.A.	Brazil	December	Finance		481,207	386,159	95,048	84,252	27,132	33,709	100.00
PT KDB Tifa Finance Tbk	Indonesia	December	Finance		130,098	41,343	88,755	13,738	5,284	2,639	84.65
KDB Silicon Valley LLC	USA	December	Finance		126,606	1,522	125,084	2,237	(1,055)	7,105	100.00
KDB OCCASIO II, L.P.	USA	December	Finance		60,554	49,495	11,059	20	(16,446)	(15,908)	90.00
KDB Synergy, L.P.	USA	December	Finance		19,643	-	19,643	-	(596)	(328)	100.00
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Korea	December	Manufacturing		12,235,665	11,490,693	744,972	5,805,906	(1,744,778)	(1,472,612)	55.68
Sam Woo Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing		268,614	264,893	3,721	121,249	(10,237)	(9,681)	100.00
KDB Capital Corporation	Korea	December	Specialized Credit Finance		8,792,535	7,427,546	1,364,989	542,270	135,968	136,090	99.92
Korea BTL Financing 1 (*2)	Korea	Semi-annually	Financial investment		329,286	215	329,071	14,607	11,773	11,773	41.67
Korea Railroad Financing 1 (*2)	Korea	Semi-annually	Financial investment		158,318	9	158,309	7,492	(3,569)	(3,569)	50.00
Korea Education Financing (*2)	Korea	Semi-annually	Financial investment		95,445	7	95,438	9,675	9,442	9,442	50.00
KDB Infrastructure Investment Asset Management Co., Ltd.	Korea	December	Asset management		70,706	10,403	60,303	39,151	19,057	19,104	84.16
KDB Investment Co., Ltd.	Korea	December	Finance		152,004	19,866	132,138	84,468	54,032	54,034	100.00
KDB Biz Co., Ltd.	Korea	December	Services		6,899	3,238	3,661	26,291	325	624	100.00
KDB Consus Value PEF	Korea	December	Financial investment		18,595,875	19,958,869	(1,362,994)	4,379,434	429,868	(1,315,065)	68.20
KDB-IAP OBOR PEF (*3)	Korea	December	Financial investment		58,878	60,084	(1,206)	-	(1,024)	(1,017)	33.52
KDB Asia PEF (*3)	Korea	December	Financial investment		194,389	172	194,217	1	(494)	20,532	50.00
KDB Small Medium Mezzanine PEF	Korea	December	Financial investment		96,666	122	96,544	4,620	3,432	3,432	66.67
Green Initiative 2nd Private Equity Fund	Korea	December	Financial investment		190,404	5,316	185,088	2	(5,795)	(5,795)	38.00
KDBC Co-investment Private Equity Fund	Korea	December	Financial investment		17,522	27	17,495	-	(544)	(544)	70.00
Corporate Liquidity Assistance Agency Co., Ltd.	Korea	December	Financial investment		3,280,515	2,215,553	1,064,962	90,631	32,625	32,625	100.00

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**11. Investments in Subsidiaries and Associates, Continued**

	December 31, 2022									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Owner-ship (%)
Associates:										
Korea Electric Power Co., Ltd.	Korea	December	Electricity Generation	234,804,994	192,804,738	42,000,256	71,257,863	(24,429,108)	(23,182,239)	32.90
Korea Tourism Organization	Korea	December	Culture and Tourism administration	1,201,900	393,608	808,292	737,973	(28,798)	(8,610)	43.58
Korea Infrastructure Financing 2 Co.	Korea	December	Financial investment	829,121	65,397	763,724	62,465	19,105	19,105	26.67
Korea Ocean Business Corporation	Korea	December	Finance	11,782,946	4,393,822	7,389,124	324,012	(1,986,514)	(1,915,571)	21.78
Korea Real Estate Board	Korea	December	Appraisal	288,236	49,791	238,445	215,197	11,583	19,805	30.60
GM Korea Company (*4)	Korea	December	Manufacturing	5,916,955	4,503,620	1,413,335	9,013,561	282,760	282,760	17.02
HMM Co., Ltd.	Korea	December	Foreign cargo transportation	25,973,455	5,285,543	20,687,912	18,582,770	10,085,271	10,655,184	20.69
HANJIN KAL (*4)	Korea	December	Holding compnay	3,915,078	1,339,021	2,576,057	200,336	659,568	851,925	10.58
Korean Air Lines Co., Ltd. (*4)	Korea	December	Air passenger transportation	28,997,701	19,705,241	9,292,460	14,096,095	1,728,363	2,268,959	3.32

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11. Investments in Subsidiaries and Associates, Continued

December 31, 2021											
	Country	Fiscal year end	Industry		Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Subsidiaries:											
KDB Asia (HK) Ltd.	Hong Kong	December	Finance	₩	3,958,732	3,402,497	556,235	130,854	42,651	84,868	100
KDB Bank Europe Ltd.	Hungary	December	Finance		1,113,228	993,801	119,427	46,211	4,333	8,031	100
KDB Ireland Ltd.	Ireland	December	Finance		698,808	585,918	112,890	22,318	5,156	13,790	100
KDB Bank Uzbekistan Ltd.	Uzbekistan	December	Finance		838,100	755,286	82,814	28,400	10,340	16,928	86.32
Banco KDB Do Brazil S.A.	Brazil	December	Finance		369,396	308,057	61,339	49,441	1,649	2,773	100
PT KDB Tifa Finance Tbk	Indonesia	December	Finance		116,553	30,437	86,116	9,137	169	2,657	84.65
KDB Silicon Valley LLC	USA	December	Finance		119,648	1,669	117,979	24	(552)	(552)	100
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Korea	December	Manufacturing		10,623,210	8,405,627	2,217,583	4,486,586	(1,699,829)	(1,650,289)	55.68
Sam Woo Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing		253,430	240,028	13,402	87,589	(9,176)	(8,939)	100
Daehan Shipbuilding Co., Ltd. (*1)	Korea	December	Manufacturing		701,881	991,844	(289,963)	763,270	(136,391)	(135,624)	70.04
KDB Capital Corporation	Korea	December	Credit Finance		7,513,809	6,217,165	1,296,644	555,801	232,376	183,742	99.92
Korea BTL Financing 1 (*2)	Korea	Semi-annually	Financial investment		361,684	237	361,447	12,709	10,819	10,819	41.67
Korea Railroad Financing 1 (*2)	Korea	Semi-annually	Financial investment		178,399	110	178,289	7,172	3,806	3,806	50
Korea Education Financing (*2)	Korea	Semi-annually	Financial investment		98,376	6	98,370	3,877	2,039	2,039	50
KDB Infrastructure Investment Asset Management Co., Ltd.	Korea	December	Asset management		68,612	11,373	57,239	37,483	18,851	18,936	84.16
KDB Investment Co., Ltd.	Korea	December	Finance		81,468	2,687	78,781	10,535	4,084	4,177	100
KDB Biz Co., Ltd.	Korea	December	Services		7,478	4,441	3,037	25,580	260	737	100
KDB Investment PEF No.1	Korea	December	Financial investment		11,017,597	8,043,123	2,974,474	-	205,231	232,737	99.40
KDB Consus Value PEF	Korea	December	Financial investment		19,680,738	19,633,413	47,325	5	14,301	(385,890)	68.20
KDB Sigma PEF II	Korea	December	Financial investment		629	12	617	39	(2,314)	(2,314)	60
KDB-IAP OBOR PEF (*3)	Korea	December	Financial investment		55,046	55,235	(189)	-	(74,212)	(70,569)	33.52
KDB Asia PEF (*3)	Korea	December	Financial investment		130,757	102	130,655	-	(2,669)	11,441	50
KDB Small Medium Mezzanine PEF	Korea	December	Financial investment		105,256	144	105,112	81,216	69,808	70,597	66.67
Corporate Liquidity Assistance Agency Co., Ltd.	Korea	December	Financial investment		3,947,608	2,915,271	1,032,337	83,857	29,628	29,628	100
Components and Materials M&A PEF	Korea	December	Financial investment		793	25	768	2	(15,695)	(15,695)	83.33

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**11. Investments in Subsidiaries and Associates, Continued**

	December 31, 2021									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Associates:										
Korea Electric Power Co., Ltd.	Korea	December	Electricity Generation	211,108,870	145,797,021	65,311,849	60,574,819	(5,315,055)	(4,754,046)	32.90
Korea Tourism Organization	Korea	December	Culture and Tourism administration	1,130,031	312,593	817,438	465,281	(71,016)	(59,751)	43.58
Korea Infrastructure Financing 2 Co.	Korea	December	Financial investment	851,153	51,177	799,976	70,165	40,891	40,891	26.67
Korea Ocean Business Corporation	Korea	December	Finance	15,040,759	5,845,062	9,195,697	5,499,512	4,187,673	4,207,691	22.11
Korea Real Estate Board	Korea	December	Appraisal	275,447	53,495	221,952	198,950	9,517	12,646	30.60
GM Korea Company (*4)	Korea	December	Manufacturing	5,013,939	3,496,897	1,517,042	6,973,860	(166,475)	(166,475)	17.02
HMM Co., Ltd.	Korea	December	Foreign cargo transportation	17,876,100	7,517,806	10,358,294	13,794,148	5,337,056	5,696,643	20.69
HANJIN KAL (*4)	Korea	December	Holding compnay	3,754,742	1,930,524	1,824,218	395,278	17,234	46,260	10.66
Troika Resources Investment PEF (*5)	Korea	December	Financial investment	5,745	1,417	4,328	286	118	118	54.94
Shinbundang Railroad Co., Ltd. (*6)	Korea	December	Other	637,906	1,000,785	(362,879)	100,586	(235,161)	(235,161)	10.98

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**11. Investments in Subsidiaries and Associates, Continued**

- (\*1) The Bank consolidates the investees which were subsidiaries of Daewoo Shipbuilding & Marine Engineering Co., Ltd. as the Bank has had control over the investees through the commencement of the administrative proceeding since the past.
- (\*2) The investees are financed by the Bank and managed by KDB Infrastructure Investments Asset Management Co., Ltd. They were included in the scope of consolidation even though the Bank holds less than half of the voting rights because the Bank is exposed to variable returns and has the ability to affect those returns through its power over the investee.
- (\*3) Although the Bank's shareholding in the investee is less than 50%, it controls the investee since it is exposed, or has right to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.
- (\*4) Although the Bank's shareholding is less than 20%, the Bank has significant influence considering the right to elect the investees' directors and the Bank classifies the companies as associates.
- (\*5) Although the Bank's shareholding in Troika Resources Investment PEF is above 50%, the Bank as joint managing member does not have the ability to direct the relevant activities unilaterally. Troika Resources Investment PEF was liquidated for the year ended December 31, 2022.
- (\*6) The Bank had significant influence over the associate as of December 31, 2021 because the shareholding is above 20% upon the consideration of shares owned by the Bank's subsidiaries. For the year ended December 31, 2022, Shinbundang Railroad Co., Ltd. was excluded from the Bank's associates due to the loss of significant influence.

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12. Property and Equipment

Changes in property and equipment for the years ended December 31, 2022 and 2021 are as follows:

		2022					
		January 1, 2022	Acquisition/ depreciation	Disposal	Reclassifi- cation	Foreign exchange differences	December 31, 2022
Acquisition cost:							
Land	₩	302,959	-	(585)	(415)	-	301,959
Buildings and structures		628,393	1,062	(1,979)	188	-	627,664
Leasehold improvements		40,637	4,005	(930)	1,366	(222)	44,856
Vehicles		769	-	(78)	-	28	719
Equipment		59,812	2,980	(2,696)	-	60	60,156
Construction in progress		34	2,546	-	(2,580)	-	-
Right-of-use assets (Real estate)		162,089	59,073	(98,426)	-	3,299	126,035
Right-of-use assets (Vehicles)		7,447	2,928	(2,422)	-	24	7,977
Right-of-use assets (Others)		29	98	(31)	-	(3)	93
Others		154,052	4,175	(559)	-	62	157,730
		1,356,221	76,867	(107,706)	(1,441)	3,248	1,327,189
Accumulated depreciation:							
Buildings and structures (*)		217,027	17,260	-	(504)	-	233,783
Leasehold improvements		34,621	3,068	(780)	-	(518)	36,391
Vehicles		616	72	(78)	-	18	628
Equipment		45,395	4,507	(2,258)	-	84	47,728
Right-of-use assets (Real estate)		48,501	31,274	(34,909)	-	1,102	45,968
Right-of-use assets (Vehicles)		4,279	2,287	(2,434)	-	22	4,154
Right-of-use assets (Others)		29	11	(31)	-	-	9
Others		128,212	13,105	(451)	-	105	140,971
		478,680	71,584	(40,941)	(504)	813	509,632
Accumulated impairment losses:							
Land		3,023	-	-	-	-	3,023
Buildings and structures		2,361	-	-	-	-	2,361
		5,384	-	-	-	-	5,384
	₩	872,157	5,283	(66,765)	(937)	2,435	812,173

(\*) The amounts include government grants.

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12. Property and Equipment, Continued

		2021				
		January 1, 2021	Acquisition/ depreciation	Disposal	Reclassifi- cation	Foreign exchange differences
						December 31, 2021
Acquisition cost:						
Land	₩	305,836	-	(62)	(2,815)	-
Buildings and structures		600,627	3,024	(693)	25,435	-
Leasehold improvements		42,180	3,296	(5,614)	54	721
Vehicles		734	-	-	-	35
Equipment		54,528	6,966	(2,653)	851	120
Construction in progress		13,615	15,058	-	(28,639)	-
Right-of-use assets (Real estate)		81,203	113,480	(24,847)	-	(7,747)
Right-of-use assets (Vehicles)		5,989	2,106	(705)	-	57
Right-of-use assets (Others)		27	-	-	-	2
Others		179,109	7,977	(33,238)	-	204
		1,283,848	151,907	(67,812)	(5,114)	(6,608)
Accumulated depreciation:						
Buildings and structures (*)		200,349	18,077	(289)	(1,110)	-
Leasehold improvements		36,025	3,030	(5,085)	-	651
Vehicles		533	64	-	-	19
Equipment		44,197	3,178	(2,125)	-	145
Right-of-use assets (Real estate)		39,533	27,208	(18,667)	-	427
Right-of-use assets (Vehicles)		2,604	2,087	(447)	-	35
Right-of-use assets (Others)		24	4	-	-	1
Others		143,817	17,212	(32,984)	-	167
		467,082	70,860	(59,597)	(1,110)	1,445
Accumulated impairment losses:						
Land		3,023	-	-	-	-
Buildings and structures		2,361	-	-	-	-
		5,384	-	-	-	-
₩		811,382	81,047	(8,215)	(4,004)	(8,053)

(\*) The amounts include government grants.

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**13. Investment Property**

Changes in investment property for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>				
	<u>January 1, 2022</u>	<u>Acquisition/ depreciation</u>	<u>Reclassification</u>	<u>December 31, 2022</u>
Acquisition cost:				
Land	₩ 60,593	-	415	61,008
Buildings and structures	58,388	-	1,026	59,414
	<u>118,981</u>	<u>-</u>	<u>1,441</u>	<u>120,422</u>
Accumulated depreciation:				
Buildings and structures	33,146	2,084	504	35,734
Accumulated impairment losses:				
Land	1,197	-	-	1,197
Buildings and structures	1,778	-	-	1,778
	<u>2,975</u>	<u>-</u>	<u>-</u>	<u>2,975</u>
₩	<u>82,860</u>	<u>(2,084)</u>	<u>937</u>	<u>81,713</u>
<b>2021</b>				
	<u>January 1, 2021</u>	<u>Acquisition/ depreciation</u>	<u>Reclassification</u>	<u>December 31, 2021</u>
Acquisition cost:				
Land	₩ 57,778	-	2,815	60,593
Buildings and structures	56,089	-	2,299	58,388
	<u>113,867</u>	<u>-</u>	<u>5,114</u>	<u>118,981</u>
Accumulated depreciation:				
Buildings and structures	29,827	2,209	1,110	33,146
Accumulated impairment losses:				
Land	1,197	-	-	1,197
Buildings and structures	1,778	-	-	1,778
	<u>2,975</u>	<u>-</u>	<u>-</u>	<u>2,975</u>
₩	<u>81,065</u>	<u>(2,209)</u>	<u>4,004</u>	<u>82,860</u>

The fair value of the Bank's investment property, as determined based on valuation by an independent appraiser, amounts to ₩99,084 million and ₩97,983 million as of December 31, 2022 and 2021, respectively. Additionally, fair value of investment in property is classified as level 3 according to the fair value hierarchy in Note 45.

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**14. Intangible Assets**

Changes in intangible assets for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>						
	January 1, 2022	Acquisition	Disposal	Amortization	Foreign exchange differences	December 31, 2022
Development expense	₩ 119,775	12,163	-	(44,363)	18	87,593
Equipment usage right	472	-	-	(49)	29	452
Other deposits provided	11,922	920	(1,523)	-	470	11,789
Others	15,530	12,910	-	(9,850)	65	18,655
	₩ 147,699	25,993	(1,523)	(54,262)	582	118,489
<b>2021</b>						
	January 1, 2021	Acquisition	Disposal	Amortization	Foreign exchange differences	December 31, 2021
Development expense	₩ 155,479	8,293	-	(44,011)	14	119,775
Equipment usage right	482	-	-	(45)	35	472
Other deposits provided	11,940	818	(858)	-	22	11,922
Others	20,516	4,772	-	(9,781)	23	15,530
	₩ 188,417	13,883	(858)	(53,837)	94	147,699

**15. Other Assets**

Other assets as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Accounts receivable	₩ 2,747,057	3,460,334
Unsettled domestic exchange receivables	3,747,333	1,794,806
Accrued income	914,618	408,168
Guarantee deposits	315,563	217,682
Financial guarantee asset	25,826	20,127
Prepaid expenses	18,374	15,969
Advance payments	9,036	8,889
Others	12,102	29,635
	7,789,909	5,955,610
Allowance for credit losses	(75,323)	(80,071)
Present value discount	(3,369)	(1,632)
	₩ 7,711,217	5,873,907

The carrying amounts of financial assets included in other assets above amounted to ₩7,676,612 million and ₩5,836,048 million as of December 31, 2022 and 2021, respectively, and their fair value amounted to ₩7,674,324 million and ₩5,835,448 million as of December 31, 2022 and 2021, respectively.

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16. Assets Held for Sale

Assets held for sale as of December 31, 2021 are as follows:

		2021			
		Acquisition cost	Fair value less costs to sell	Carrying amount	Impairment loss
Assets held for sale:					
Investments in subsidiaries (*1)	₩	2,244,664	1,371,052	1,371,052	258,428
Investments in associates (*2)		-	-	-	(27)
	₩	2,244,664	1,371,052	1,371,052	258,401

(\*1) As the Bank and Hyundai Heavy Industries Co., Ltd. ("Hyundai Heavy Industries") made the investment contract (hereinafter, "the contract") with an investment in kind on March 8, 2019 and proceeded with the sale for attracting investment in Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("Daewoo Shipbuilding & Marine Engineering") of the Bank's subsidiary, the Bank classified the shares of Daewoo Shipbuilding & Marine Engineering as assets held for sale. The European Commission did not approve the merger between Korea Shipbuilding & Marine Engineering Co., Ltd. and Daewoo Shipbuilding & Marine Engineering on January 13, 2022. As a result of the disapproval, the contract's precondition including governmental permission of different countries was not satisfied and the Bank and Korea Shipbuilding & Marine Engineering Co., Ltd. cancelled this contract on March 8, 2022. For the year ended December 31, 2022, the Bank's shares of Daewoo Shipbuilding & Marine Engineering Co., Ltd. were excluded from assets held for sale.

(\*2) For the year ended December 31, 2021, the sale of the share of Hanjin Heavy Industries & Construction Co., Ltd., the Bank's associate, has been completed.

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**17. Financial Liabilities Measured at FVTPL**

(1) Financial liabilities measured at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Debentures	₩ 1,131,310	1,636,163
Deposits	338,414	430,981
	₩ <u>1,469,724</u>	<u>2,067,144</u>

Changes in fair value of structured debentures and deposits which hedge accounting are applied, are recognized in profit or loss, but structured debentures with no hedge accounting applied to, are measured at amortized costs. Therefore, such structured debentures and deposits, not applied to hedge accounting, have been designated at FVTPL to eliminate mismatch in measurements of accounting profit and loss.

(2) The difference between the carrying amount and contractual cash flow amount of financial liabilities measured at fair value through profit or loss as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Carrying amount	₩ 1,469,724	2,067,144
Contractual cash flow amounts	2,101,133	2,110,955
Difference	₩ <u>(631,409)</u>	<u>(43,811)</u>

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**18. Deposits**

Deposits as of December 31, 2022 and 2021 are as follows:

	December 31, 2022		December 31, 2021	
	Amortized cost	Fair value	Amortized cost	Fair value
Deposits in Korean won:				
Demand deposits	₩ 123,617	123,617	86,428	86,428
Time and savings deposits	54,389,265	54,328,886	41,041,409	41,005,081
Certificates of deposit	757,471	758,937	342,105	341,901
	<u>55,270,353</u>	<u>55,211,440</u>	<u>41,469,942</u>	<u>41,433,410</u>
Deposits in foreign currencies:				
Demand deposits	1,312,008	1,312,057	1,536,950	1,536,950
Time and savings deposits	3,955,130	3,949,240	4,411,690	4,410,697
Certificates of deposit	6,187,960	6,195,534	4,341,640	4,322,711
	<u>11,455,098</u>	<u>11,456,831</u>	<u>10,290,280</u>	<u>10,270,358</u>
Off-shore deposits in foreign currencies:				
Demand deposits	835,904	835,904	670,777	670,777
Certificates of deposit	765,301	765,794	361,122	360,884
	<u>1,601,205</u>	<u>1,601,698</u>	<u>1,031,899</u>	<u>1,031,661</u>
	<u>₩ 68,326,656</u>	<u>68,269,969</u>	<u>52,792,121</u>	<u>52,735,429</u>

**19. Borrowings**

(1) Borrowings as of December 31, 2022 and 2021 are as follows:

	December 31, 2022			
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Borrowings in Korean won	-	3.23	₩ 4,551,011	4,507,549
Borrowings in foreign currencies	0.06	6.57	14,220,220	14,148,918
Off-shore borrowings in foreign currencies	0.16	5.16	5,205,830	5,157,170
Others	0.05	3.25	1,452,656	1,453,711
			<u>25,429,717</u>	<u>25,267,348</u>
Deferred borrowing costs			(473)	
			<u>₩ 25,429,244</u>	
	December 31, 2021			
	Minimum interest rate (%)	Maximum interest rate (%)	Amortized cost	Fair value
Borrowings in Korean won	-	3.15	₩ 4,329,798	4,318,893
Borrowings in foreign currencies	-	5.31	13,265,326	13,260,468
Off-shore borrowings in foreign currencies	-	3.35	2,300,131	2,298,068
Others	0.01	3.29	2,168,670	2,167,736
			<u>22,063,925</u>	<u>22,045,165</u>
Deferred borrowing costs			(148)	
			<u>₩ 22,063,777</u>	

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**19. Borrowings, Continued**

(2) Borrowings in Korean won before adjusting for gains and losses on deferred borrowing costs as of December 31, 2022 and 2021 are as follows:

<u>Lender</u>	<u>Classification</u>	<u>Annual interest rate (%)</u>		<u>December 31, 2022</u>	<u>December 31, 2021</u>
Ministry of Economy and Finance	Borrowings from government fund (*)	2.94 ~ 3.23	₩	93,155	108,932
Korea SMEs and Startups Agency	Borrowings from small and medium enterprise promotion fund	0.66 ~ 2.91		57,569	61,240
Ministry of Culture, Sports and Tourism	Borrowings from tourism promotion fund	0.09 ~ 2.44		3,182,920	3,005,749
Korea Energy Agency	Borrowings from fund for rational use of energy	0.25 ~ 1.85		268,659	282,178
Local governments	Borrowings from local small and medium enterprise promotion fund	0.00 ~ 3.23		27,167	27,658
The Bank of Korea	Borrowings from Bank of Korea	0.25 ~ 1.75		375,350	378,160
Others	Borrowings from petroleum enterprise fund and others	0.00 ~ 3.15		546,191	465,881
			₩	<u>4,551,011</u>	<u>4,329,798</u>

(\*) Borrowings from government fund are subordinated borrowings.

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**19. Borrowings, Continued**

(3) Borrowings and off-shore borrowings in foreign currencies before adjusting for gains and losses on deferred borrowing costs as of December 31, 2022 and 2021 are as follows:

<b>Lender</b>	<b>Classification</b>	<b>Annual interest rate (%)</b>		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Mizuho and others	Bank loans from foreign funds	3M Libor + 0.29 ~ 6M Libor + 0.24	₩	1,394,030	355,650
Ministry of Strategy and Finance	Exchange equalization fund borrowings in foreign currencies	3M Libor + 0.65 ~ 3M Libor + 0.74		120,761	199,792
Central Bank of the Republic Uzbekistan and others	Off-shore short term borrowings	0.16 ~ 5.16		3,682,012	1,292,571
China Development Bank and others	Off-shore long term borrowings	2.34 ~ 3.36		1,523,818	1,007,560
Others	Short-term borrowings in foreign currencies	0.06 ~ 6.57		12,150,612	11,775,597
	Long term borrowings in foreign currencies	0.10 ~ 5.41		554,817	934,287
			₩	<u>19,426,050</u>	<u>15,565,457</u>

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20. Debentures

Debentures as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>					
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Debentures in Korean won:					
Debentures	0.88	6.60	₩	121,351,724	118,883,372
Discount on debentures				(334,416)	
Valuation adjustment for fair value hedges				(419,107)	
				<u>120,598,201</u>	
Debentures in foreign currencies:					
Debentures	0.05	10.87		20,910,800	21,072,312
Discount on debentures				(37,691)	
Premium on debentures				91	
Valuation adjustment for fair value hedges				(1,000,475)	
				<u>19,872,725</u>	
Off-shore debentures:					
Debentures	-	11.15		18,859,840	18,272,508
Discount on debentures				(48,784)	
Valuation adjustment for fair value hedges				(570,086)	
				<u>18,240,970</u>	
			₩	<u>158,711,896</u>	<u>158,228,192</u>
<b>December 31, 2021</b>					
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Debentures in Korean won:					
Debentures	0.75	6.60	₩	109,608,752	109,390,833
Discount on debentures				(75,224)	
Valuation adjustment for fair value hedges				(89,080)	
				<u>109,444,448</u>	
Debentures in foreign currencies:					
Debentures	-	10.87		19,488,365	20,634,957
Discount on debentures				(40,580)	
Premium on debentures				1,338	
Valuation adjustment for fair value hedges				143,805	
				<u>19,592,928</u>	
Off-shore debentures:					
Debentures	-	7.00		16,242,288	16,420,828
Discount on debentures				(28,401)	
Valuation adjustment for fair value hedges				114,067	
				<u>16,327,954</u>	
			₩	<u>145,365,330</u>	<u>146,446,618</u>

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**21. Defined Benefit Liabilities (Assets)**

The Bank implements a defined benefit retirement pension plan based on employee compensation benefits and service periods. The plan assets are in trusts with Kookmin Bank, Samsung Life Insurance Co., Ltd., etc.

(1) Details of defined benefit liabilities (assets) as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Present value of defined benefit liabilities	₩	354,703	391,015
Fair value of plan assets		(442,473)	(400,368)
	₩	<u>(87,770)</u>	<u>(9,353)</u>

(2) Changes in defined benefit liabilities (assets) for the years ended December 31, 2022 and 2021 are as follows:

<b>2022</b>			
	Present value of defined benefit obligation	Fair value of plan assets	Defined benefit liabilities (assets)
Beginning balance	₩ 391,015	(400,368)	(9,353)
Current service costs	35,998	-	35,998
Interest expense (income)	11,796	(12,065)	(269)
Past service costs	34,363	-	34,363
Remeasurements of defined benefit liabilities:			
Demographic assumption	6,171	-	6,171
Financial assumption	(83,170)	7,484	(75,686)
Experience adjustment	(1,802)	-	(1,802)
	<u>(78,801)</u>	<u>7,484</u>	<u>(71,317)</u>
Payments from the plan	(39,657)	(37,524)	(77,181)
Contributions to the plan	(11)	-	(11)
Ending balance	₩ <u>354,703</u>	<u>(442,473)</u>	<u>(87,770)</u>

<b>2021</b>			
	Present value of defined benefit obligation	Fair value of plan assets	Defined benefit liabilities (assets)
Beginning balance	₩ 415,529	(364,983)	50,546
Current service costs	39,382	-	39,382
Interest expense (income)	9,850	(9,238)	612
Remeasurements of defined benefit liabilities:			
Demographic assumption	-	-	-
Financial assumption	(44,008)	5,540	(38,468)
Experience adjustment	(11,332)	-	(11,332)
	<u>(55,340)</u>	<u>5,540</u>	<u>(49,800)</u>
Payments from the plan	(18,406)	18,313	(93)
Contributions to the plan	-	(50,000)	(50,000)
Ending balance	₩ <u>391,015</u>	<u>(400,368)</u>	<u>(9,353)</u>

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**21. Defined Benefit Liabilities (Assets), Continued**

(3) Fair value of plan assets for each type as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	Quoted market prices	Unquoted market prices	Quoted market prices	Unquoted market Prices
Due from banks	₩ -	442,473	-	400,368

(4) Defined benefit costs recognized in profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Current service costs	₩ 35,998	39,382
Interest expense, net	(269)	612
Past service costs	34,363	-
	₩ 70,092	39,994

(5) The principal actuarial assumptions used as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Discount rate (%)	5.35	3.03
Future salary increasing rate (%)	5.50	5.54

(6) The present value sensitivity of defined benefit obligation as changes in principal actuarial assumptions as of December 31, 2022 is as follows:

	<b>Sensitivity</b>	
	1% increase in assumption	1% decrease in assumption
Discount rate	8.09% decrease	9.36% increase
Future salary increasing rate	9.25% increase	8.15% decrease

(7) The weighted average duration of defined benefit obligation is 9.63 years and 11.63 years as of December 31, 2022 and 2021, respectively. There are no expected contributions to the plans for the next reporting period as of December 31, 2022.

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22. Provisions

(1) Details of provisions as of December 31, 2022 and 2021 are as follows:

	December 31, 2022	December 31, 2021
Provision for unused commitments	₩ 431,390	667,101
Provision for financial guarantee	42,741	72,420
Provision for payment guarantees	953,425	757,621
Provision for possible losses from lawsuits	239	1,731
Provision for restoration	14,206	14,620
Other provision	6,029	54,037
	<u>₩ 1,448,030</u>	<u>1,567,530</u>

(2) Changes in provision for unused commitments for the years ended December 31, 2022 and 2021 are as follows:

2022				
	12-month expected credit loss	Lifetime expected credit losses		Total
		Non credit- impaired	Credit- impaired	
Beginning balance	₩ 332,151	327,085	7,865	667,101
Transfer to 12-month expected credit loss	45,756	(45,756)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(18,733)	20,346	(1,613)	-
Transfer to credit-impaired exposures	(1,210)	(4,344)	5,554	-
Provision for (reversal of) unused commitments	(252,773)	(1,357)	(2,690)	(256,820)
Foreign currency translation	16,580	4,335	194	21,109
Ending balance	<u>₩ 121,771</u>	<u>300,309</u>	<u>9,310</u>	<u>431,390</u>
2021				
	12-month expected credit loss	Lifetime expected credit losses		Total
		Non credit- impaired	Credit- impaired	
Beginning balance	₩ 479,933	290,827	-	770,760
Transfer to 12-month expected credit loss	267,476	(267,476)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired exposures	(34,669)	34,669	-	-
Transfer to credit-impaired exposures	(3,793)	(3,513)	7,306	-
Provision for (reversal of) unused commitments	(410,437)	272,136	471	(137,830)
Foreign currency translation	33,641	442	88	34,171
Ending balance	<u>₩ 332,151</u>	<u>327,085</u>	<u>7,865</u>	<u>667,101</u>

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**22. Provisions, Continued**

(3) Changes of financial guarantee provision for the years ended December 31, 2022 and 2021 are as follows:

2022					
		12-month expected credit loss	Lifetime expected credit losses		
			Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	2,721	31,427	38,272	72,420
Transfer to 12-month expected credit loss		-	-	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(282)	1,494	(1,212)	-
Transfer to credit-impaired exposures		(97)	(243)	340	-
Provision for (reversal of) financial guarantee		(1,681)	4,004	(32,002)	(29,679)
Ending balance	₩	661	36,682	5,398	42,741
2021					
		12-month expected credit loss	Lifetime expected credit losses		
			Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	45,567	26,007	5,924	77,498
Transfer to 12-month expected credit loss		86	(14)	(72)	-
Transfer to lifetime expected credit losses:					-
Transfer to non credit-impaired exposures		(1,518)	1,523	(5)	-
Transfer to credit-impaired exposures		(9,227)	(93)	9,320	-
Provision for (reversal of) financial guarantee		(32,187)	4,004	23,105	(5,078)
Ending balance	₩	2,721	31,427	38,272	72,420

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22. Provisions, Continued

(4) Changes in provision for payment guarantees for the years ended December 31, 2022 and 2021 are as follows:

2022					
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	179,232	199,694	378,695	757,621
Transfer to 12-month expected credit loss		9,036	(190)	(8,846)	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(129,944)	131,290	(1,346)	-
Transfer to credit-impaired exposures		(164)	(2,667)	2,831	-
Provision for (reversal of) payment guarantees		2,486	175,279	(40,776)	136,989
Foreign currency translation		3,504	33,849	21,462	58,815
Ending balance	₩	64,150	537,255	352,020	953,425

2021					
		Lifetime expected credit losses			
		12-month expected credit loss	Non credit- impaired	Credit- impaired	Total
Beginning balance	₩	183,963	155,646	264,039	603,648
Transfer to 12-month expected credit loss		105,507	(105,507)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(90,952)	90,952	-	-
Transfer to credit-impaired exposures		(4,090)	(1,552)	5,642	-
Provision for (reversal of) payment guarantees		(20,070)	54,942	98,769	133,641
Foreign currency translation		4,874	5,213	10,245	20,332
Ending balance	₩	179,232	199,694	378,695	757,621

(5) Changes of lawsuit provision and other provision for the years ended December 31, 2022 and 2021 are as follows:

2022			
	Lawsuit provision	Provision for restoration	Other provision
Beginning balance	₩ 1,731	14,620	54,037
Increase (reversal) of provision	(1,492)	(2,008)	-
Provision used and others	-	1,594	(48,008)
Ending balance	₩ 239	14,206	6,029

2021			
	Lawsuit provision	Provision for restoration	Other provision
Beginning balance	₩ 441	15,365	47,458
Increase (reversal) of provision	1,408	(1,820)	6,596
Provision used and others	(118)	1,075	(17)
Ending balance	₩ 1,731	14,620	54,037

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22. Provisions, Continued

(6) Provision for payment guarantees and financial guarantee provision

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off-statement of financial position items in the notes to the financial statements. The Bank provides a provision for such off-statement of financial position items, applying a Credit Conversion Factor ("CCF") and provision rates under the Bank's expected credit loss model, and records the provision as a reserve for expected credit losses on acceptances and guarantees.

In the case of financial guarantee contracts, when the amount calculated using the same method as above is greater than the initial amount less amortization of fees recognized, the difference is recorded as a financial guarantee provision.

(7) Provision for unused commitments

The Bank records a provision for a certain portion of unused credit lines which is calculated using a CCF as provision for unused commitments applying provision rates under the Bank's expected credit loss model.

(8) Provision for possible losses from lawsuits

As of December 31, 2022, the Bank is involved in 13 lawsuits as a plaintiff and 23 lawsuits as a defendant. The aggregate amounts of claims as a plaintiff and a defendant amounted to ₩149,743 million and ₩208,154 million, respectively. The Bank provided a provision against contingent loss from pending lawsuits as of December 31, 2022 and additional losses may be incurred depending on the result of pending lawsuits.

Major lawsuits in progress as of December 31, 2022 and 2021 are as follows:

	December 31, 2022		
	Contents	Amounts	Status of lawsuit
Plaintiff:			
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩ 136,538	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled against the Bank; 3 <sup>rd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Transfer of claim	8,792	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled partially in favor of the Bank; 3 <sup>rd</sup> trial in progress
Hana Bank and 6 others	Claim for undue benefit	1,647	1 <sup>st</sup> trial ruled against the Bank, 2 <sup>nd</sup> trial in progress
e-RAP KOREA Co., Ltd. and one other	Claim for loans (participate in succession)	1,238	1 <sup>st</sup> trial in progress
Defendant:			
Shinhan Bank and one other	Claim for damages	58,474	1 <sup>st</sup> trial in progress
169 individuals including Mr. Kim	Claim for wage	36,573	1 <sup>st</sup> trial ruled in favor of the Bank, 2 <sup>nd</sup> trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor	33,997	1 <sup>st</sup> trial ruled in favor of the Bank; 2 <sup>nd</sup> trial ruled against the Bank; 3 <sup>rd</sup> trial in progress
Woori Bank	Claim for profit and loss settlement	21,246	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled against the Bank
Dongbu Corporation	Claim for objection of request (participation to support)	19,658	1 <sup>st</sup> trial in progress
Export-Import Bank of Korea	Claim for undue benefit	9,797	1 <sup>st</sup> trial ruled in favor of the Bank, 2 <sup>nd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Claim for transaction amount (counterclaim)	7,000	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled partially in favor of the Bank; 3 <sup>rd</sup> trial in progress

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22. Provisions, Continued

		December 31, 2021		
		Contents	Amounts	Status of lawsuit
Plaintiff:				
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩	136,538	1 <sup>st</sup> trial ruled against the Bank; 2 <sup>nd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Transfer of claim		8,792	1 <sup>st</sup> trial ruled partially in favor of the Bank; 2 <sup>nd</sup> trial in progress
Hana Bank and 6 others	Claim for undue benefit		1,647	1 <sup>st</sup> trial in progress
Kappa Korea and one other	Claim for loans		1,000	1 <sup>st</sup> trial in progress
Defendant:				
Shinhan Bank and one other	Claim for damages		58,474	1 <sup>st</sup> trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor		33,997	1 <sup>st</sup> trial ruled in favor of the Bank; 2 <sup>nd</sup> trial ruled against the Bank; 3 <sup>rd</sup> trial in progress
Dongbu Corporation	Claim for objection of request (participation to support)		19,658	1 <sup>st</sup> trial in progress
Hana Bank	Claim for settlement money and others		7,500	1 <sup>st</sup> , 2 <sup>nd</sup> trial ruled in favor of the Bank; 3 <sup>rd</sup> trial in progress
KAMCO 1st JV Securitization Specialty Co., Ltd.	Claim for transaction amount		7,000	1 <sup>st</sup> trial ruled partially in favor of the Bank

(9) Other provision

The Bank recognised other provision as a reserve for other miscellaneous purpose.

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**23. Other Liabilities**

(1) Other liabilities as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Accounts payable	₩ 2,740,749	3,418,503
Lease liabilities	167,070	157,111
Accrued expense	1,863,498	1,444,423
Unearned income	115,598	39,182
Deposits withholding tax	43,823	24,111
Guarantee money received	832,614	173,264
Foreign exchanges payable	40,557	77,692
Domestic exchanges payable	242,266	617,446
Borrowing from trust accounts	755,127	1,049,712
Financial guarantee liability	28,886	23,093
Others	254,627	113,396
	<u>7,084,815</u>	<u>7,137,933</u>
Present value discount	(91,134)	(45,037)
	<u>₩ 6,993,681</u>	<u>7,092,896</u>

The carrying amount of financial liabilities included in other liabilities above amounted to ₩6,717,731 million and ₩6,817,630 million as of December 31, 2022 and 2021, respectively, and their fair value amounted to ₩6,704,736 million and ₩6,807,462 million as of December 31, 2022 and 2021, respectively.

(2) Details of lease liabilities as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>		
	Face value	Discount	Carrying amounts
Real estate	₩ 162,676	(89,084)	73,592
Vehicles	4,321	(411)	3,910
Others	73	(3)	70
	<u>₩ 167,070</u>	<u>(89,498)</u>	<u>77,572</u>

	<b>December 31, 2021</b>		
	Face value	Discount	Carrying amounts
Real estate	₩ 153,420	(42,796)	110,624
Vehicles	3,691	(432)	3,259
	<u>₩ 157,111</u>	<u>(43,228)</u>	<u>113,883</u>

(3) The amount related to lease recognized in profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Depreciation of right-of-use assets	₩	
Real estate	31,274	27,208
Vehicles	2,287	2,087
Others	11	4
	<u>33,572</u>	<u>29,299</u>
Interest expenses on the lease liabilities	1,561	483
Expense relating to leases of low-value assets	8,427	7,988
	<u>₩ 43,560</u>	<u>37,770</u>

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**23. Other Liabilities, Continued**

(4) Cash flows used in lease liabilities for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Decrease in lease liabilities	₩	27,893	25,020
Lease payments relating to leases of low-value assets		8,427	7,988
	₩	<u>36,320</u>	<u>33,008</u>

(5) Maturity analysis of undiscounted lease payments relating to lease liabilities as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>					
		Within 3 months	3 months ~ 1 year	1 year ~ 5 years	Over 5 years
Lease payments	₩	12,931	36,044	103,576	14,519
					Total
					167,070

<b>December 31, 2021</b>					
		Within 3 months	3 months ~ 1 year	1 year ~ 5 years	Over 5 years
Lease payments	₩	7,950	18,555	116,780	13,826
					Total
					157,111

**24. Equity**

(1) Issued capital

The Bank is authorized to issue up to 6,000 million shares of common stock and has 4,630,311,768 shares issued and 4,377,311,768 shares issued as of December 31, 2022 and 2021, respectively, and outstanding with a total par value (₩ 5,000 of par value per share) of ₩23,151,559 million and ₩21,886,559 million as of December 31, 2022 and 2021, respectively.

(2) Capital surplus

Capital surplus as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Paid-in capital in excess of par value	₩	40,442	44,142
Surplus from capital reduction (*1)		44,373	44,373
Other capital surplus (*2)		2,390,495	2,390,495
	₩	<u>2,475,310</u>	<u>2,479,010</u>

(\*1) The Bank reduced ₩5,178,600 million of its issued capital in 1998 and 2000 to offset its accumulated deficit amounting to ₩5,134,227 million. As the result of the capital reduction, ₩44,373 million of surplus exceeding accumulated deficit was recorded in capital surplus in equity.

(\*2) The difference in the amount of shares issued and the carrying value of net asset acquired occurring from the merger of the Bank with KDB Financial Group Inc. and Korea Finance Corporation are recognized as other capital surplus.

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**24. Equity, Continued**

(3) Accumulated other comprehensive income

(i) Accumulated other comprehensive income as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Net gain on securities measured at FVOCI		
Valuation gain on securities measured at FVOCI (before tax)	₩ 3,393,442	6,399,029
Loss allowance for securities measured at FVOCI (before tax)	86,178	86,449
Income tax effect	(922,099)	(1,783,506)
	<u>2,557,521</u>	<u>4,701,972</u>
Exchange differences on translation of foreign operations:		
Exchange differences on translation of foreign operations (before tax)	132,126	39,000
Income tax effect	-	-
	<u>132,126</u>	<u>39,000</u>
Valuation gain on cash flow hedge:		
Valuation gain on cash flow hedge (before tax)	7,241	1,930
Income tax effect	(1,919)	(531)
	<u>5,322</u>	<u>1,399</u>
Net gain (loss) on hedges of net investments in foreign operations:		
Net gain (loss) on hedges of net investments in foreign operations (before tax)	(96,874)	(29,120)
Income tax effect	25,672	8,008
	<u>(71,202)</u>	<u>(21,112)</u>
Remeasurements of defined benefit liabilities:		
Remeasurements of defined benefit liabilities (before tax)	142,678	71,362
Income tax effect	(37,808)	(19,623)
	<u>104,870</u>	<u>51,739</u>
Fair value changes on financial liabilities designated at fair value due to credit risk:		
Valuation gain (loss) on financial liabilities designated at fair value due to credit risk (before tax)	123,398	657
Income tax effect	(32,702)	(181)
	<u>90,696</u>	<u>476</u>
	<u>₩ 2,819,333</u>	<u>4,773,474</u>

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**24. Equity, Continued**

(ii) Changes in accumulated other comprehensive income for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>			
		January 1, 2022	Increase (Decrease)	Tax Effect	December 31, 2022
Gain on securities measured at FVOCI	₩	4,701,972	(3,005,858)	861,407	2,557,521
Exchange differences on translation of foreign operations		39,000	93,126	-	132,126
Valuation gain on cash flow hedge		1,399	5,311	(1,388)	5,322
Net gain (loss) on hedges of net investments in foreign operations		(21,112)	(67,754)	17,664	(71,202)
Remeasurements of defined benefit liabilities		51,739	71,316	(18,185)	104,870
Valuation gain (loss) on financial liabilities designated at fair value due to credit risk		476	122,741	(32,521)	90,696
	₩	<u>4,773,474</u>	<u>(2,781,118)</u>	<u>826,977</u>	<u>2,819,333</u>
		<b>2021</b>			
		January 1, 2021	Increase (Decrease)	Tax Effect	December 31, 2021
Gain on securities measured at FVOCI	₩	2,079,878	3,616,681	(994,587)	4,701,972
Exchange differences on translation of foreign operations		(60,912)	99,912	-	39,000
Valuation gain on cash flow hedge		34	1,883	(518)	1,399
Net gain (loss) on hedges of net investments in foreign operations		35,507	(78,095)	21,476	(21,112)
Remeasurements of defined benefit liabilities		15,634	49,800	(13,695)	51,739
Valuation gain (loss) on financial liabilities designated at fair value due to credit risk		(5,770)	8,616	(2,370)	476
	₩	<u>2,064,371</u>	<u>3,698,797</u>	<u>(989,694)</u>	<u>4,773,474</u>

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**24. Equity, Continued**

(4) Retained earnings

In accordance with the *Korea Development Bank Act*, the Bank is required to appropriate at least 40% of net income as a legal reserve. This reserve can be transferred to paid-in capital or offset an accumulated deficit.

In accordance with the *Korea Development Bank Act*, the Bank offsets an accumulated deficit with reserves. If the reserve is insufficient to offset the accumulated deficit, the Korean government is responsible for the deficit.

(i) Retained earnings as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Legal reserve	₩ 2,535,892	1,551,154
Voluntary reserve		
Regulatory reserve for loan losses	247,252	482,885
Unappropriated retained earnings	4,439,027	5,329,775
	₩ 7,222,171	7,363,814

(ii) Changes in legal reserve for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 1,551,154	1,356,142
Transfer from retained earnings	984,738	195,012
Ending balance	₩ 2,535,892	1,551,154

(iii) Changes in unappropriated retained earnings for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 5,329,775	2,565,852
Contribution to legal reserve	(984,738)	(195,012)
Transfer from regulatory reserve for credit losses	235,632	663,153
Dividends	(833,089)	(209,638)
Reclassification of gain or loss on equity securities measured at FVOCI	226,465	43,574
Profit for the year	464,981	2,461,846
Ending balance	₩ 4,439,026	5,329,775

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**24. Equity, Continued**

(iv) Statements of appropriation of retained earnings for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
I. Unappropriated retained earnings:		
Unappropriated retained earning carried forward from the prior year	₩ 3,747,580	2,824,355
Gain on disposal of securities measured at FVOCI	226,465	43,574
Profit for the year	<u>464,981</u>	<u>2,461,846</u>
	4,439,026	5,329,775
II. Transfers such as discretionary reserves		
Transfer from to regulatory reserve for credit losses	<u>35,256</u>	<u>235,632</u>
	35,256	235,632
III. Appropriation of retained earnings:		
Contribution to legal reserve	185,993	984,739
Dividends (₩36 for 2022 and ₩190 for 2021 per share)	<u>164,744</u>	<u>833,089</u>
	<u>350,737</u>	<u>1,817,828</u>
IV. Unappropriated retained earnings to be carried over to subsequent year	<u>₩ 4,123,545</u>	<u>3,747,579</u>

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**24. Equity, Continued**

(5) Regulatory reserve for credit losses

The Bank is required to provide a regulatory reserve for credit losses in accordance with *Regulations on Supervision of Banking Business 29(1) and (2)*. The details of regulatory reserve for credit losses are as follows:

(i) Regulatory reserve for credit losses as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Beginning balance	₩	247,253	482,885
Planned reversal of reserve for credit losses		(35,257)	(235,632)
Ending balance	₩	211,996	247,253

(ii) Required reversal of regulatory reserve for credit losses and profit after adjusting regulatory reserve for loan losses for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>	<b>2021</b>
Profit for the year	₩	464,981	2,461,846
Obligated amount of reversal of regulatory reserve for credit losses		35,257	235,632
Profit after adjusting regulatory reserve for credit losses	₩	500,238	2,697,478
Earnings per share after adjusting regulatory reserve for credit losses (in won)	₩	112	625

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**25. Net Interest Income**

Net interest income for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Interest income:		
Due from banks	₩ 133,499	27,254
Securities measured at FVTPL	23,681	23,736
Securities measured at FVOCI	559,328	347,468
Loans measured at amortized cost	87,840	21,913
Loans measured at FVTPL	12,402	17,042
Loans measured at amortized cost	6,029,985	3,687,863
	<u>6,846,735</u>	<u>4,125,276</u>
Interest expense:		
Financial liabilities measured at FVTPL	(82,977)	(82,058)
Deposits	(1,162,006)	(370,202)
Borrowings	(554,587)	(137,662)
Debentures	(3,303,350)	(1,876,745)
	<u>(5,102,920)</u>	<u>(2,466,667)</u>
	<u>₩ 1,743,815</u>	<u>1,658,609</u>

**26. Net Fees and Commission Income**

Net fees and commission income for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Fees and commission income:		
Loan commissions	₩ 141,401	120,414
Underwriting and investment consulting commissions	123,490	103,131
Brokerage and agency commissions	7,059	7,317
Trust and retirement pension plan commissions	34,240	34,561
Fees on asset management	2,049	2,502
Other fees	183,709	112,398
	<u>491,948</u>	<u>380,323</u>
Fees and commission expenses:		
Brokerage and agency fees	(9,093)	(7,635)
Other fees	(28,946)	(25,982)
	<u>(38,039)</u>	<u>(33,617)</u>
	<u>₩ 453,909</u>	<u>346,706</u>

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**27. Dividend Income**

Dividend income for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Securities measured at FVTPL	₩ 297,652	218,475
Securities measured at FVOCI	171,706	112,366
Investments in subsidiaries and associates	388,144	928,804
	<u>₩ 857,502</u>	<u>1,259,645</u>

**28. Net Gain (Loss) on Securities Measured at FVTPL**

Net gain (loss) related to securities measured at FVTPL for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Gains on securities measured at FVTPL:		
Gains on sale	₩ 190,140	66,358
Gains on valuation	289,190	271,999
	<u>479,330</u>	<u>338,357</u>
Losses on securities measured at FVTPL:		
Losses on sale	(176,304)	(75,374)
Losses on valuation	(342,125)	(127,364)
Purchase related expense	(324)	(171)
	<u>(518,753)</u>	<u>(202,909)</u>
	<u>₩ (39,423)</u>	<u>135,448</u>

**29. Net Gain on Financial Liabilities Measured at FVTPL**

Net gain related to financial liabilities measured at fair value through profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Gains on financial liabilities measured at FVTPL:		
Gains on redemption	₩ 5,438	625
Gains on valuation	459,661	152,243
	<u>465,099</u>	<u>152,868</u>
Losses on financial liabilities measured at FVTPL:		
Losses on redemption	-	(309)
Losses on valuation	-	(2,679)
	<u>-</u>	<u>(2,988)</u>
	<u>₩ 465,099</u>	<u>149,880</u>

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**30. Net Loss on Securities Measured at FVOCI**

Net loss related to securities measured at FVOCI for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Gains on securities measured at FVOCI:		
Gains on sale	₩ 6,486	14,495
Reversal of impairment losses	2,432	-
	<u>8,918</u>	<u>14,495</u>
Losses on securities measured at FVOCI:		
Losses on sale	(64,798)	(37,653)
Impairment losses	(1,314)	(4,763)
	<u>(66,112)</u>	<u>(42,416)</u>
	<u>₩ (57,194)</u>	<u>(27,921)</u>

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**31. Net Gain (Loss) on Derivatives**

Net gain (loss) on derivatives for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Net gain on trading purpose derivatives:		
Gains on trading purpose derivatives:		
Interest ₩	5,165,418	2,485,586
Currency	17,393,137	11,370,394
Stock	7,216	13,801
Gains on adjustment of derivatives	17,241	4,336
	<u>22,583,012</u>	<u>13,874,117</u>
Losses on trading purpose derivatives:		
Interest	(4,580,277)	(2,378,834)
Currency	(17,170,546)	(10,910,300)
Stock	(16,401)	(4,194)
Losses on adjustment of derivatives	(49,297)	(92,276)
	<u>(21,816,521)</u>	<u>(13,385,604)</u>
	766,491	488,513
Net loss on hedging purpose derivatives:		
Gains on hedging purpose derivatives:		
Interest	350,465	70,831
Currency	262,364	163,829
Gains on adjustment of derivatives	309	362
	<u>613,138</u>	<u>235,022</u>
Losses on hedging purpose derivatives:		
Interest	(1,971,755)	(705,149)
Currency	(814,174)	(717,324)
Losses on adjustment of derivatives	(448)	(422)
	<u>(2,786,377)</u>	<u>(1,422,895)</u>
	(2,173,239)	(1,187,873)
Net gain on fair value hedged items:		
Gains on fair value hedged items:		
Gains on valuation	2,264,372	773,826
Gains on redemption	101,186	184,599
	<u>2,365,558</u>	<u>958,425</u>
Losses on fair value hedged items:		
Losses on valuation	(441,181)	(255,932)
Losses on redemption	(396,190)	(205,224)
	<u>(837,371)</u>	<u>(461,156)</u>
	1,528,187	497,269
₩	<u>121,439</u>	<u>(202,091)</u>

Related with cash flow hedge, the Bank recognized ₩267 million of loss and ₩152 million of gain in the statements of comprehensive income as the ineffective portion for the years ended December 31, 2022 and 2021, respectively.

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**32. Net Foreign Currency Transaction Gain (Loss)**

Net foreign currency transaction gain (loss) for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Net loss on foreign exchange transactions:		
Gains on foreign exchange transactions	₩ 1,044,586	567,692
Losses on foreign exchange transactions	(1,056,155)	(577,226)
	<u>(11,569)</u>	<u>(9,534)</u>
Net gain (loss) on foreign currency translations:		
Gains on foreign currency translations	14,184,182	8,839,001
Losses on foreign currency translations	(14,473,503)	(8,675,100)
	<u>(289,321)</u>	<u>163,901</u>
	<u>₩ (300,890)</u>	<u>154,367</u>

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**33. Other Operating Income (Expense), net**

Other operating income (expense) for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Other operating income:		
Gains on sale of loans	₩ 36,930	60,323
Gains on disposal of loans measured at FVTPL	8,100	1,860,411
Gains on valuation of loans measured at FVTPL	9,294	83,760
Gains on disposal of investments in subsidiaries and associates	9,823	90,601
Reversal of provisions	47,622	3,687
Others	21,026	16,586
	<u>132,795</u>	<u>2,115,368</u>
Other operating expenses:		
Losses on sale of loans	(9,110)	(28,298)
Losses on disposal of loans measured at FVTPL	(8,709)	(9,692)
Losses on valuation of loans measured at FVTPL	(88,248)	(4,349)
Losses on disposal of investments in subsidiaries and associates	(4,399)	(592)
Increase in provisions	(159)	(9,872)
Insurance expenses	(91,363)	(75,121)
Credit guarantee fund salary	(201,730)	(189,504)
Educational taxes	(38,695)	(33,842)
Foreign security contributions	(11,256)	(5,384)
Others	(28,953)	(20,098)
	<u>(482,622)</u>	<u>(376,752)</u>
	<u>₩ (349,827)</u>	<u>1,738,616</u>

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**34. Provision for Credit Losses**

Provision for credit losses for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Provision for loan loss allowance	₩ 410,450	855,548
Provision for (reversal of) other assets	(579)	1,076
Provision for (reversal of) unused commitments	(256,820)	(137,830)
Provision for (reversal of) financial guarantee provision	(29,679)	(5,078)
Provision for (reversal of) payment guarantees	136,989	133,641
	<u>₩ 260,361</u>	<u>847,357</u>

**35. General and Administrative Expenses**

General and administrative expenses for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Payroll costs:		
Short-term employee benefits	₩ 392,968	388,800
Defined benefit costs	70,092	39,995
Defined contribution costs	9,081	7,085
	<u>472,141</u>	<u>435,880</u>
Depreciation and amortization:		
Depreciation of property and equipment	71,584	70,860
Amortization of intangible assets	54,262	53,837
	<u>125,846</u>	<u>124,697</u>
Other:		
Employee welfare benefits	38,684	33,955
Rent expenses	5,783	5,078
Taxes and dues	39,686	35,228
Advertising expenses	17,762	17,465
Electronic data processing expenses	86,406	83,418
Fees and charges	39,410	36,442
Others	50,653	43,583
	<u>278,384</u>	<u>255,169</u>
	<u>₩ 876,371</u>	<u>815,746</u>

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**36. Other Non-Operating Income and Expense**

Other non-operating income and expense for the years ended December 31, 2022 and 2021 are as follows:

	<u>2022</u>	<u>2021</u>
Other non-operating income:		
Gain on disposal of assets held for sale ₩	-	3,610
Reversal of impairment loss on assets held for sale	-	27
Gain on disposal of property and equipment	1,912	2,074
Gain on disposal of intangible assets	3	-
Rental income on investment property	3,138	2,877
Others	8,853	5,942
	<u>13,906</u>	<u>14,530</u>
Other non-operating expense:		
Losses of disposal of assets held for sale	-	(2)
Impairment loss on assets held for sale	-	(258,428)
Losses on disposal of property and equipment	(1,172)	(592)
Loss on disposal of intangible assets	(5)	-
Depreciation of investment property	(2,084)	(2,209)
Donations	(5,578)	(6,594)
Others	(1,489)	(4,554)
	<u>(10,328)</u>	<u>(272,379)</u>
₩	<u><u>3,578</u></u>	<u><u>(257,849)</u></u>

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**37. Income Tax Expense**

(1) Income tax expense for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Current income tax (*)	₩ 35,069	312,034
Changes in income tax before the prior years	(156,122)	(350,718)
Changes in deferred income taxes on temporary differences	(335,728)	2,238,422
Effect of unused tax loss	(156,618)	-
Deferred income tax recognized directly to equity		
Other comprehensive income	826,977	(989,694)
Retained earnings	(85,900)	(16,528)
Income tax expense	₩ 127,678	1,193,516

(\*) Includes changes such as those that arise from final tax returns.

(2) Profit before income taxes and income tax expense for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Profit before income taxes	₩ 592,659	3,655,362
Income taxes calculated using enacted tax rates	162,981	1,005,224
Adjustments:		
Non-deductible losses and tax-free gains	(25,196)	(45,570)
Non-recognition effect of deferred income taxes	108,071	258,005
Net adjustments for prior years	(38,944)	(34,694)
Tax rate reduction effects	(94,731)	-
Others	15,497	10,551
	(35,303)	188,292
Income tax expense	₩ 127,678	1,193,516
Effective tax rate (%)	21.54	32.65

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**37. Income Tax Expense, Continued**

(3) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>				Deferred tax
	January 1, 2022 (*)	Decrease	Increase	December 31, 2022	assets (liabilities)
Derivatives	₩ (484,588)	(484,588)	1,198,740	1,198,740	317,666
Investments in subsidiaries and associates	(9,363,282)	(164,416)	1,168,617	(8,030,249)	(2,863,687)
Losses on fair value hedged items valuation	123,404	123,404	(1,797,984)	(1,797,984)	(476,466)
Losses on foreign exchange translation for hedged liabilities	(162,252)	(162,252)	(132,878)	(132,878)	(35,213)
Impairment losses on debt securities	65,933	-	-	65,933	17,472
Impairment losses on equity securities	55,831	43,931	-	11,900	3,154
Defined benefit obligation	367,092	35,937	-	331,155	87,756
Plan assets	(366,341)	(27,677)	(65,574)	(404,238)	(107,123)
Financial assets held for trading	(50,634)	407	(10,644)	(61,685)	(16,347)
Available-for-sale financial assets	(146,364)	-	-	(146,364)	178
Write-off	3,461,549	2,208,028	24,555	1,278,076	332,973
Provisions	1,067,718	1,574,419	1,494,405	987,704	261,742
Property impairment losses	6,284	173	-	6,111	1,619
Dividends Receivable	13,609	-	-	13,609	3,606
Loan origination fees	(16,573)	(16,573)	(21,697)	(21,697)	(5,750)
Gains on sales of loans	(2,396,048)	(4,542)	(150,102)	(2,541,608)	(673,526)
Others	(674,045)	2,043,140	1,106,100	(1,611,085)	(469,850)
	(8,498,707)	5,169,391	2,813,538	(10,854,560)	(3,621,794)
Temporary differences from unrecognized deferred tax assets and liabilities:					
Investments in subsidiaries and associates, etc.	2,512,727	-	299,860	2,812,587	-
	₩ (11,011,434)	5,169,391	3,113,398	(13,667,147)	(3,621,794)
Unused tax loss	₩ -	-	591,011	591,011	156,618

(\*) Temporary differences as of January 1, 2022 reflected previous year's additional tax adjustment after the financial statements were issued.

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37. Income Tax Expense, Continued

	2021				
	January 1, 2021 (*)	Decrease	Increase	December 31, 2021	Deferred tax assets (liabilities)
Derivatives	₩ (1,478,054)	(1,478,054)	(484,588)	(484,588)	(133,262)
Investments in subsidiaries and associates	(6,936,110)	55,644	(2,461,274)	(9,453,028)	(3,248,672)
Losses on fair value hedged items valuation	680,195	680,195	123,404	123,404	33,936
Losses on foreign exchange translation for hedged liabilities	(18,376)	(18,376)	(162,252)	(162,252)	(44,619)
Impairment losses on debt securities	65,933	-	-	65,933	18,132
Impairment losses on equity securities	60,351	7,021	-	53,330	14,666
Defined benefit obligation	385,405	18,313	-	367,092	100,950
Plan assets	(336,831)	(18,313)	(24,514)	(343,032)	(94,334)
Financial assets held for trading	(43,634)	7,407	407	(50,634)	(13,924)
Available-for-sale financial assets	(146,364)	-	-	(146,364)	185
Write-off	3,443,577	277,227	293,107	3,459,457	939,146
Provisions	923,130	1,429,831	1,574,419	1,067,718	293,622
Property impairment losses	6,457	173	-	6,284	1,728
Dividends Receivable	8,365	8,365	5,245	5,245	1,442
Loan origination fees	(9,063)	(9,063)	(16,573)	(16,573)	(4,558)
Gains on sales of loans	(63,311)	(242)	(2,332,979)	(2,396,048)	(658,913)
Others	(825,857)	4,672,829	1,604,388	(3,894,298)	(1,163,047)
	(4,284,187)	5,632,957	(1,881,210)	(11,798,354)	(3,957,522)
Temporary differences from unrecognized deferred tax assets and liabilities:					
Investments in subsidiaries and associates, etc.	1,886,720	-	626,007	2,512,727	-
	₩ (6,170,907)	5,632,957	(2,507,217)	(14,311,081)	(3,957,522)

(\*) Temporary differences as of January 1, 2021 reflected previous year's additional tax adjustment after the financial statements were issued.

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**37. Income Tax Expense, Continued**

(4) Changes in income tax expense recognized directly to equity for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>				
		<b>December 31, 2022</b>		<b>January 1, 2022</b>		<b>Changes in tax effect</b>
		<b>Amounts before tax</b>	<b>Tax effect</b>	<b>Amounts before tax</b>	<b>Tax effect</b>	
Net gain (loss) on securities measured at FVOCI	₩	2,557,521	(922,099)	4,701,972	(1,783,506)	861,407
Exchange differences on translation of foreign operations		132,126	-	39,000	-	-
Net gain (loss) on valuation of cash flow hedge		5,322	(1,919)	1,399	(531)	(1,388)
Net gain on hedges of net investments in foreign operations		(71,202)	25,672	(21,112)	8,008	17,664
Remeasurements of defined benefit liabilities		104,870	(37,808)	51,739	(19,623)	(18,185)
Fair value changes on financial liabilities designated at fair value due to credit risk		90,696	(32,702)	476	(181)	(32,521)
	₩	<u>2,819,333</u>	<u>(968,856)</u>	<u>4,773,474</u>	<u>(1,795,833)</u>	<u>826,977</u>

Income tax benefit recognized direct to retained earnings amounting to ₩85,900 million is the tax effect of realized income amounting to ₩ 312,365 million from disposal of equity securities measured at FVOCI.

		<b>2021</b>				
		<b>December 31, 2021</b>		<b>January 1, 2021</b>		<b>Changes in tax effect</b>
		<b>Amounts before tax</b>	<b>Tax effect</b>	<b>Amounts before tax</b>	<b>Tax effect</b>	
Net gain (loss) on securities measured at FVOCI	₩	4,701,972	(1,783,506)	2,079,878	(788,919)	(994,587)
Exchange differences on translation of foreign operations		39,000	-	(60,912)	-	-
Net gain (loss) on valuation of cash flow hedge		1,399	(531)	34	(13)	(518)
Net gain on hedges of net investments in foreign operations		(21,112)	8,008	35,507	(13,468)	21,476
Remeasurements of defined benefit liabilities		51,739	(19,623)	15,634	(5,928)	(13,695)
Fair value changes on financial liabilities designated at fair value due to credit risk		476	(181)	(5,770)	2,189	(2,370)
	₩	<u>4,773,474</u>	<u>(1,795,833)</u>	<u>2,064,371</u>	<u>(806,139)</u>	<u>(989,694)</u>

Income tax benefit recognized direct to retained earnings amounting to ₩16,528 million is the tax effect of realized income amounting to ₩60,102 million from disposal of equity securities measured at FVOCI.

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**38. Earnings per Share**

(1) Basic earnings per share

The Bank's basic earnings per share for the years ended December 31, 2022 and 2021 are computed as follows:

(i) Basic earnings per share

	<b>2022</b>	<b>2021</b>
Profit attributable to ordinary shareholders of the Bank (A) (in won)	₩ 464,981,486,967	2,461,845,944,398
Weighted-average number of ordinary shares outstanding (B)	4,477,598,343	4,319,226,656
Basic earnings per share (A/B) (in won)	₩ 104	570

(ii) Weighted-average number of ordinary shares outstanding

	<b>2022</b>		
	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	4,377,311,768	365	1,597,718,795,320
Increased paid-in capital (B)	78,400,000	318	24,931,200,000
Increased paid-in capital (C)	61,600,000	184	11,334,400,000
Increased paid-in capital (D)	113,000,000	3	339,000,000
Cumulative shares (D = A+B+C+D)			1,634,323,395,320
Weighted-average number of ordinary shares outstanding (D/365)			4,477,598,343

	<b>2021</b>		
	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	4,153,145,768	365	1,515,898,205,320
Increased paid-in capital (B)	102,000,000	338	34,476,000,000
Increased paid-in capital (C)	122,166,000	214	26,143,524,000
Cumulative shares (D = A+B+C)			1,576,517,729,320
Weighted-average number of ordinary shares outstanding (D/365)			4,319,226,656

(2) Diluted earnings per share

Diluted and basic earnings per share for the years ended December 31, 2022 and 2021 are equal because there is no potential dilutive instrument.

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**39. Pledged Assets**

Assets pledged by the Bank as collateral as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	Pledged assets	Related liabilities	Pledged assets	Related liabilities
Securities measured at FVOCI (*)	₩ 3,721,125	432,969	4,369,781	1,685,428
Securities measured at amortized cost (*)	3,196,592		2,455,324	
	₩ 6,917,717	432,969	6,825,105	1,685,428

(\*) Pledged as collateral related to bonds sold under repurchase agreements and borrowings.

**40. Guarantees and Commitments**

Guarantees and commitments as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Confirmed acceptances and guarantees:		
Acceptances in foreign currency	₩ 220,420	276,041
Guarantees for bond issuance	1,860,754	2,224,142
Guarantees for loans	560,129	611,091
Letter of guarantee	64,924	37,292
Guarantees for on-lending debt	4,877	6,794
Others	6,219,285	4,593,406
	8,930,389	7,748,766
Unconfirmed acceptances and guarantees:		
Letter of credit	1,940,855	1,979,841
Others	5,836,016	4,224,656
	7,776,871	6,204,497
Commitments:		
Commitments on loans	47,205,974	46,591,132
Others	2,020,595	2,020,595
	49,226,569	48,611,727
	₩ 65,933,829	62,564,990

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**41. Trust Accounts**

(1) Trust accounts as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Accrued trust fee	₩ 10,052	8,585
Borrowings from trust accounts	583,034	965,733
Accrued interest on deposits	511	686

(2) Transactions with trust accounts for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Trust management fee	₩ 31,223	31,729
Interest expenses of borrowings from trust accounts	17,585	7,167

(3) The carrying amounts of principals guaranteed money trust and principals and interest guaranteed money trust as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Principals guaranteed money trust	₩ 224,876	236,858
Principals and interest guaranteed money trust	229,324	234,697
	<b>₩ 454,200</b>	<b>471,555</b>
Principal of money and property trust	₩ 421,623	436,299
Accrued trust profit	32,577	35,256

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**42. Related Party Transactions**

(1) The Bank's related parties as of December 31, 2022 are as follows:

<b>Classification</b>	<b>Corporate name</b>
Subsidiaries	KDB Capital Corporation, Daewoo Shipbuilding & Marine Engineering Co., Ltd., KDB Infrastructure Investment Asset Management Co., Ltd., KDB Asia Ltd., KDB Ireland Ltd., KDB Bank Europe Ltd., Banco KDB Do Brazil S.A., KDB Bank Uzbekistan, PT KDB Tifa Finance Tbk and 7 others, KDB Investment PEF No. 2, KDB Consus Value PEF, KDB Small Medium Mezzanine PEF and 7 others, Principals guaranteed trust accounts of KDB, Principals and interests guaranteed interest trust accounts of KDB, KDB ESG 1ST INC. and 12 others, KIAMCO Road Investment Private Fund Special Asset Trust 2 and 17 others
Associates	Korea Electric Power Co., Ltd., Korea Tourism Organization, Korea Real Estate Board, GM Korea Company, HMM Co., Ltd., HANJIN KAL, Korean Air Lines Co., Ltd., Korea Ocean Business Corporation and 14 others, Keystone Value Investment 2nd Private Equity Fund and 99 others, Hana K-New Deal Unicorn Fund and 112 others
Others	Key management personnel

(2) Significant balances with related parties as of December 31, 2022 and 2021 are as follows:

	<b>Account</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Subsidiaries:			
KDB Capital Corporation	Loans	₩ 1,924	74,158
	Allowance for loan losses	(1)	(36)
	Derivative financial assets	1,305	1,463
	Other assets	2	4
	Deposits	100,255	447
	Other liabilities	35,408	35,539
KDB Infrastructure Investment Asset Management Co., Ltd.	Deposits	606	9,028
	Other liabilities	1	34
KDB Ireland Ltd.	Loans	753,188	543,636
	Allowance for loan losses	(241)	(158)
	Derivative financial assets	18	5,141
	Other assets	3,138	114
	Derivative financial liabilities	19,778	1,510
KDB Bank Europe Ltd.	Cash and due from banks	365,513	353,575
	Loans	40,536	-
	Allowance for loan losses	(13)	-
	Derivative financial assets	-	2,202
	Other assets	2,854	-
	Derivative financial liabilities	501	-
	Other liabilities	-	1,872
Banco KDB Do Brazil S.A.	Cash and due from banks	87,444	59,275
	Loans	234,451	210,426
	Allowance for loan losses	(75)	(78)
	Other assets	2,802	317
	Allowance of other assets	(1)	-
PT KDB Tifa Finance Tbk	Loans	25,346	23,710
	Allowance for loan losses	(8)	(7)
	Other assets	92	12

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42. Related Party Transactions, Continued

	Account	December 31, 2022	December 31, 2021
KDB Silicon Valley LLC	Deposits	₩ 107,721	86,542
	Other liabilities	321	20
KDB Asia Ltd.	Cash and due from banks	1,346,583	1,344,965
	Loans	228,114	450,474
	Allowance for loan losses	(73)	(130)
	Derivative financial assets	25	26
	Other assets	8,872	1,237
	Allowance of other assets	(1)	-
	Deposits	2	2
	Borrowings	32,967	43,707
	Derivative financial liabilities	14,551	2,408
	Other liabilities	146	167
KDB Investment PEF No.1	Loans	-	600,000
	Allowance for loan losses	-	(2,554)
	Derivative financial assets	-	800
	Other assets	-	8,758
	Allowance of other assets	-	(32)
	Deposits	-	215,203
	Derivative financial liabilities	-	3,550
	Other liabilities	-	140
	Other provisions	-	1,630
KDB Consus Value PEF	Securities	18,494	40,101
	Derivative financial assets	13,564	8,633
	Other assets	149	345
	Deposits	139	62
	Derivative financial liabilities	8,302	1,083
	Other liabilities	708	702
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Loans	1,549,024	1,432,973
	Allowance for loan losses	(821,394)	(599,475)
	Derivative financial assets	460,879	194,696
	Other assets	10,650	1,488
	Deposits	169,965	473,357
	Derivative financial liabilities	18	2,731
	Other liabilities	13,144	30,802
	Other provisions	786,164	781,272
Corporate Liquidity Assistance Agency Co., Ltd.	Loans	440,000	440,000
	Allowance for loan losses	(152)	(142)
	Other assets	44,544	24,331
	Allowance of other assets	(15)	(8)
	Deposits	444,924	610,416
	Other liabilities	507	190
	Other provisions	144	135
Others	Loans	1,336,253	1,015,470
	Allowance for loan losses	(141,003)	(432,829)
	Derivative financial assets	5,473	10,697
	Other assets	3,105	11,853
	Allowance of other assets	(344)	(5,384)
	Deposits	136,609	93,295
	Borrowings	44,553	95,565
	Derivative financial liabilities	850	205
	Other liabilities	6,078	16,927
	Other provisions	3,728	246,239

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42. Related Party Transactions, Continued

	Account		December 31, 2022	December 31, 2021
Associates:				
Korea Electric Power Co., Ltd.	Securities	₩	177,317	10,759
	Loans		227,477	236,223
	Allowances for loan losses		(1,151)	(1,428)
	Derivative financial assets		92,381	2,409
	Other assets		4,409	2,074
	Deposits		23,196	400,963
	Borrowings		2,253	2,649
	Derivative financial liabilities		223,611	149,969
	Other liabilities		57,487	3,434
	Other provisions		59	12
KG Dongbu Steel Co., Ltd.	Loans		-	783,695
	Allowances for loan losses		-	(4,093)
	Other assets		-	375
	Deposits		-	12,294
	Other liabilities		-	76
	Other provisions		-	682
HMM Co., Ltd.	Securities		5,233,622	7,315,547
	Loans		164,292	202,509
	Allowances for loan losses		(2,243)	(30,614)
	Other assets		7,123	7,236
	Deposits		509,920	1,876,483
	Other liabilities		10,468	9,145
HANJIN KAL	Loans		373,445	449,252
	Other assets		481	518
	Deposits		70,000	-
	Other liabilities		1,050	-
Korean Air Lines Co., Ltd.	Loans		1,189,100	-
	Allowances for loan losses		(8,798)	-
	Other assets		11,989	-
	Deposits		1,716,833	-
	Other liabilities		23,075	-
	Derivative financial liabilities		73,131	-
Korea Ocean Business Corporation	Loans		-	15,237
	Allowances for loan losses		-	(2)
	Other assets		-	16
	Deposits		25,000	40,000
	Other liabilities		386	237
Others	Securities		-	1,454
	Loans		209,978	445,904
	Allowances for loan losses		(480)	(8,250)
	Other assets		6,472	6,900
	Deposits		323,333	470,808
	Other liabilities		2,215	2,307
	Other provisions		46	76,500

(\*1) Daewoo Engineering & Construction Co., Ltd. that was the subsidiary of KDB Investment PEF No.1 is disposed and is excluded from the Bank's related parties for the year ended December 31, 2022.

(\*2) KG Dongbu Steel Co., Ltd. is excluded from the Bank's related parties due to the disposal of shares for the year ended December 31, 2022.

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**42. Related Party Transactions, Continued**

(3) Significant profit or loss with related parties for the years ended December 31, 2022 and 2021 are as follows:

	Account	2022	2021
Subsidiaries:			
KDB Capital Corporation	Interest income ₩	305	92
	Dividend income	69,766	27,956
	Reversal of allowance for loan losses	35	-
	Fees and commission income, other income	5,418	6,018
	Interest expenses	(1,058)	(417)
	Provision for loan losses	-	(33)
	Other operating expenses	(119)	(513)
KDB Infrastructure Investments Asset Management Co., Ltd.	Dividend income	13,499	9,089
	Interest expenses	(106)	(121)
KDB Ireland Ltd.	Interest income	12,111	1,186
	Fees and commission income, other income	4,626	5,176
	Interest expenses	(1)	(1)
	Provision for loan losses	(74)	(57)
	Other operating expenses	(26,771)	(8,028)
KDB Bank Europe Ltd.	Interest income	5,846	712
	Fees and commission income, other income	183	2,760
	Interest expenses	(4)	(1)
	Provision for loan losses	(13)	-
	Other operating expenses	(6,900)	(596)

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42. Related Party Transactions, Continued

	Account	2022	2021
Banco KDB Do Brazil S.A.	Interest income	₩ 5,133	1,016
	Reversal of allowance for loan losses	8	-
	Provision for loan losses	-	(45)
	Other operating expenses	(1)	-
PT KDB Tifa Finance Tbk	Interest income	576	160
	Provision for loan losses	(1)	(1)
KDB Silicon Valley LLC	Fees and commission income, other income	384	-
	Interest expenses	(2,648)	(22)
KDB Asia Ltd.	Interest income	36,144	8,258
	Reversal of allowance for loan losses	63	-
	Fees and commission income, other income	830	2,386
	Interest expenses	(821)	(426)
KDB Investment PEF No.1	Provision for loan losses	-	(57)
	Other operating expenses	(14,167)	(6,412)
	Interest income	2,926	22,780
	Fees and commission income, other income	2,949	2,567
KDB Consus Value PEF	Interest expenses	(230)	(230)
	Other operating expenses	-	(4,805)
	Interest income	1,404	1,600
	Fees and commission income, other income	34,354	21,087
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Interest expenses	(7)	(6)
	Other operating expenses	(11,114)	(1,094)
	Interest income	55,968	21,470
	Fees and commission income, other income	1,101,411	696,230
Corporate Liquidity Assistance Agency Co., Ltd.	Interest expenses	(4,732)	(4,988)
	Provision for loan losses	(195,154)	(117,849)
	Other operating expenses	(527,175)	(247,919)
	Interest income	20,212	19,880
Others	Fees and commission income, other income	-	33
	Interest expenses	(7,752)	(7,226)
	Provision for loan losses	(10)	(78)
	Other operating expenses	(16)	(7)
	Interest income	40,171	44,048
	Dividend income	58,996	74,548
	Reversal of allowance for loan losses	253,724	72,674
	Fees and commission income, other income	222,300	195,228
	Interest expenses	(2,631)	(639)
	Provision for loan losses	(382,807)	(118,800)
	Other operating expenses	(184,219)	(216,888)

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42. Related Party Transactions, Continued

	Account	2022	2021
Associates:			
Korea Electric Power Co., Ltd.	Interest income	₩ 12,096	2,994
	Dividend income	-	256,862
	Reversal of allowance for loan losses	379	351
	Fees and commission income, other income	136,288	19,298
	Interest expenses	(3,357)	(1,006)
	Other operating expenses	(208,915)	(254,043)
KG Dongbu Steel Co., Ltd.	Interest income	-	11,889
	Dividend income	-	1,101
	Reversal of allowance for loan losses	-	51,228
	Fees and commission income, other income	-	27,840
	Interest expenses	-	(13)
	Other operating expenses	-	(10,866)
HMM Co., Ltd.	Interest income	42,406	43,330
	Dividend income	60,720	-
	Reversal of allowance for loan losses	28,372	62,402
	Fees and commission income, other income	19,561	1,830,596
	Interest expenses	(7,724)	(3,377)
	Other operating expenses	(192,015)	(85,660)
Hanjin Heavy Industries & Construction Co., Ltd. (*)	Interest income	-	2,962
	Fees and commission income, other income	-	133,190
	Interest expenses	-	(177)
	Provision for loan losses	-	(3,514)
	Other operating expenses	-	(2,930)
	Interest income	6,713	7,012
HANJIN KAL	Fees and commission income, other income	15	58,399
	Interest expenses	(1,184)	-
	Other operating expenses	(75,807)	-
	Interest income	44,609	-
	Reversal of allowance for loan losses	13,348	-
	Fees and commission income, other income	62,228	-
Korean Air Lines Co., Ltd.	Interest expenses	(41,878)	-
	Other operating expenses	(144,436)	-
	Interest income	343	213
	Reversal of allowance for loan losses	2	-
	Fees and commission income, other income	2,907	1,338
	Interest expenses	(266)	(237)
Korea Ocean Business Corporation	Interest income	343	213
	Reversal of allowance for loan losses	2	-
	Fees and commission income, other income	2,907	1,338
	Interest expenses	(266)	(237)
	Interest income	343	213
	Reversal of allowance for loan losses	2	-

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**42. Related Party Transactions, Continued**

	<b>Account</b>		<b>2022</b>	<b>2021</b>
Others	Interest income	₩	6,738	20,066
	Dividend income		218,852	606,017
	Reversal of allowance for loan losses		4	348,053
	Fees and commission income, other income		5,639	23,393
	Interest expenses		(6,422)	(2,332)
	Provision for loan losses		(129)	(641)
	Other operating expenses		(329)	(31,566)

(\*) The amounts are profit or loss recognized until the Hanjin Heavy Industries & Construction Co., Ltd. was excluded from the related parties due to the Bank's sale of shares for the year ended December 31, 2021.

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**42. Related Party Transactions, Continued**

(4) Details of guarantees and commitments to the related parties as of December 31, 2022 and 2021 are as follows:

	<b>Account</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Subsidiaries:			
KDB Capital Corporation	Commitments	₩ 500,000	250,000
KDB Investment PEF No.1	Unconfirmed acceptances and guarantees	-	4,386
	Commitments	-	413,874
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Confirmed acceptances and guarantees	2,560,260	1,457,948
	Unconfirmed acceptances and guarantees	2,781,317	1,818,741
	Commitments	2,337,089	4,047,436
Corporate Liquidity Assistance Agency Co., Ltd.	Commitments	560,000	560,000
Others	Confirmed acceptances and guarantees	-	464,349
	Unconfirmed acceptances and guarantees	5,885	192,627
	Commitments	85,625	501,800
Associates:			
KG Dongbu Steel Co., Ltd. (*)	Unconfirmed acceptances and guarantees	-	32,487
	Commitments	-	186,021
Korean Air Lines Co., Ltd.	Confirmed acceptances and guarantees	177,367	-
Others	Commitments	426,085	221,182
		₩ 9,433,628	10,150,851

(\*) KG Dongbu Steel Co., Ltd. is excluded from the Bank's related parties due to the disposal of shares for the year ended December 31, 2021.

(5) Details of compensation to key management personnel for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Short-term employee benefits	₩ 1,166	1,213
Post-employment benefits	30	33
	₩ 1,196	1,246

(6) The Bank are not pledged any assets as collaterals to the related parties and from the related parties as of December 31, 2022 and 2021.

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**43. Statements of Cash Flows**

(1) Cash and cash equivalents in the statements of cash flows as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Cash and due from banks:		
Cash and foreign currencies	₩ 70,525	55,083
Due from banks in Korean won	3,931,203	6,007,684
Due from banks in foreign currencies / off-shores	7,537,078	5,913,000
	<u>11,538,806</u>	<u>11,975,767</u>
Less: Restricted due from banks, others	(4,450,242)	(3,409,429)
Add: Financial instruments reaching maturity within three months from date of acquisition		
Securities measured at FVTPL		
Government and public bonds	39,903	-
Loans measured at amortized cost:		
Call-loans	2,249,447	653,340
Inter-bank loans	2,494,555	233,898
	<u>4,744,002</u>	<u>887,238</u>
	<u>₩ 11,872,469</u>	<u>9,453,576</u>

(2) Significant transactions not involving cash flows for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Decrease in loans due to write-offs	₩ 85,067	33,671
Increase in securities measured at FVOCI due to debt-to-equity swap, etc	13,505	146,183
Increase in investments in subsidiaries and associates due to debt-to-equity swap, etc.	-	2,658,000
Increase (decrease) in accumulated other comprehensive income due to securities valuation	(3,005,858)	3,616,681
Deferred income tax effect due to securities valuation	861,407	(994,587)
Reclassification of investments in subsidiaries and associates to assets held for sale	(1,371,052)	-
Reclassification from investments in subsidiaries and associates to securities measured at FVOCI	19,125	-
Transfer from property and equipment to investment property	937	4,004
Recognition of right-of-use assets and lease liabilities	62,099	115,586
In-kind equity	565,000	-

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**44. Transfers of Financial Instruments**

Details of financial assets and liabilities related to repurchase agreements and loaned securities sold and loaned debt securities that do not qualify for derecognition as of December 31, 2022 and 2021 are as follows:

Characteristics of transactions		December 31, 2022		December 31, 2021	
		Carrying amounts for transferred assets	Carrying amounts for related liabilities	Carrying amounts for transferred assets	Carrying amounts for related liabilities
Repurchase agreements	₩	2,373,401	57,619	3,349,080	1,307,268
Loaned securities		-	-	417,640	-
	₩	2,373,401	57,619	3,766,720	1,307,268

**45. Fair Value of Financial Assets and Liabilities**

The Bank classifies and discloses fair value of the financial instruments into the following three-level hierarchy:

- Level 1: Financial instruments measured at quoted prices from active markets are classified as level 1.
- Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.
- Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

(1) Fair value hierarchy of financial instruments measured at fair value

(i) The fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

		December 31, 2022			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Securities measured at FVTPL	₩	623,264	718,103	10,610,539	11,951,906
Securities measured at FVOCI		2,929,043	18,531,804	16,224,072	37,684,919
Loans measured at FVTPL		-	-	541,811	541,811
Derivative financial assets		-	9,781,693	12,762	9,794,455
	₩	3,552,307	29,031,600	27,389,184	59,973,091
Financial liabilities:					
Financial liabilities measured at FVTPL	₩	-	1,469,724	-	1,469,724
Derivative financial liabilities		34	11,276,609	40,359	11,317,002
	₩	34	12,746,333	40,359	12,786,726
		December 31, 2021			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Securities measured at FVTPL	₩	606,008	1,348,367	7,864,436	9,818,811
Securities measured at FVOCI		1,819,791	17,419,641	18,635,704	37,875,136
Loans measured at FVTPL		-	-	644,412	644,412
Derivative financial assets		1	5,295,504	10,067	5,305,572
	₩	2,425,800	24,063,512	27,154,619	53,643,931
Financial liabilities:					
Financial liabilities measured at FVTPL	₩	-	2,067,144	-	2,067,144
Derivative financial liabilities		2	4,746,616	11,223	4,757,841
	₩	2	6,813,760	11,223	6,824,985

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45. **Fair Value of Financial Assets and Liabilities, Continued**

(ii) Changes in the fair value of level 3 financial instruments for the years ended December 31, 2022 and 2021 are as follows:

		2022					
		Financial assets				Financial liabilities	
		Securities measured at FVTPL	Securities measured at FVOCI	Loans measured at FVTPL	Derivative financial assets	Total	Derivative financial liabilities
January 1, 2022	₩	7,864,436	18,635,704	644,412	10,067	27,154,619	11,223
Profit or loss		118,898	-	(78,954)	5,295	45,239	29,136
Other comprehensive income		-	(2,321,954)	-	-	(2,321,954)	-
Acquisition / Issue		2,981,856	1,364,206	50,950	-	4,397,012	-
Sale / Settlement		(360,003)	(853,910)	(74,597)	(2,600)	(1,291,110)	-
Transfer out (*)		-	(599,974)	-	-	(599,974)	-
Transfer in (*)		5,352	-	-	-	5,352	-
December 31, 2022	₩	<u>10,610,539</u>	<u>16,224,072</u>	<u>541,811</u>	<u>12,762</u>	<u>27,389,184</u>	<u>40,359</u>
		2021					
		Financial assets				Financial liabilities	
		Securities measured at FVTPL	Securities measured at FVOCI	Loans measured at FVTPL	Derivative financial assets	Total	Derivative financial liabilities
January 1, 2021	₩	6,232,064	14,634,541	1,434,514	8,214	22,309,333	6,451
Profit or loss		172,327	-	79,411	8,547	260,285	4,772
Other comprehensive income		-	3,691,901	-	-	3,691,901	-
Acquisition / Issue		1,857,647	494,015	52,450	-	2,404,112	-
Sale / Settlement		(397,602)	(157,861)	(921,963)	(6,694)	(1,484,120)	-
Transfer out (*)		-	(26,892)	-	-	(26,892)	-
Transfer in (*)		-	-	-	-	-	-
December 31, 2021	₩	<u>7,864,436</u>	<u>18,635,704</u>	<u>644,412</u>	<u>10,067</u>	<u>27,154,619</u>	<u>11,223</u>

(\*) When significant inputs become observable market data, the financial instruments are transferred to (from) other levels.

(iii) Changes in deferred day one profit or loss for the years ended December 31, 2022 and 2021 are as follows:

	<b>2022</b>	<b>2021</b>
Beginning balance	₩ 3,989	4,375
Amortization	(385)	(386)
Ending balance	₩ <u>3,604</u>	<u>3,989</u>

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**45. Fair Value of Financial Assets and Liabilities, Continued**

(iv) Details of valuation technique and inputs used in the fair value measurement categorized within level 2 of the fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

	<b>Valuation technique</b>	<b>Input</b>
Securities measured at FVTPL		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Securities measured at FVOCI		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Derivatives financial assets:		
Interest rate swaps	Discounted cash flow method,	Discount rate, exchange rate,
Currency forwards and swaps	Black-Scholes model, Modified	volatility, commodity index,
Currency options	Black model, Formula model	etc.
Commodities options		
Financial liabilities measured at FVTPL:		
Debentures	Discounted cash flow method	Discount rate

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**45. Fair Value of Financial Assets and Liabilities, Continued**

(v) Details of valuation technique and quantitative information about unobservable inputs used in the fair value measurement categorized within level 3 of the fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>			
	<b>Valuation technique</b>	<b>Unobservable input</b>	<b>Range (%)</b>
Securities measured at FVTPL			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach, etc.	Discount rate Rate of increase in property disposal price Rate of increase in liquidation value Volatility	6.35 ~ 41.31 - - 16.89 ~ 44.54
Securities measured at FVOCI			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach, etc.	Growth rate Discount rate Volatility	- 9.08 ~ 18.51 16.52 ~ 46.53
Loans measured at FVTPL			
Convertible bonds, etc.	LSMC, Binomial model	Volatility	16.89 ~ 44.54
Derivatives financial assets			
Interest rate swaps	Discounted cash flow	Volatility Correlation coefficient	80.87 ~ 102.80 0.87 ~ 0.95
Interest rate options	Modified Black model	Volatility	80.87 ~ 102.80
Stock index options	Black-Scholes model	Volatility	8.70 ~ 72.20
<b>December 31, 2021</b>			
	<b>Valuation technique</b>	<b>Unobservable input</b>	<b>Range (%)</b>
Securities measured at FVTPL			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach, etc.	Discount rate Rate of increase in property disposal price Rate of increase in liquidation value Volatility	6.52 ~ 13.22 - - 17.89 ~ 41.50
Securities measured at FVOCI			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Growth rate Discount rate Volatility	- 7.70 ~ 17.56 19.48 ~ 33.20
Loans measured at FVTPL			
Convertible bonds, etc.	LSMC, Binomial model	Volatility	17.89 ~ 34.16
Derivatives financial assets			
Interest rate swaps	Discounted cash flow	Volatility Correlation coefficient	38.23 ~ 49.07 0.43 ~ 0.87
Interest rate options	Modified Black model	Volatility	38.23 ~ 49.07
Stock index options	Black-Scholes model	Volatility	5.40 ~ 71.40
Equity options	Discounted cash flow method and others	Volatility	18.87 ~ 25.49

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45. **Fair Value of Financial Assets and Liabilities, Continued**

- (vi) The sensitivity analysis on changes in unobservable inputs for financial instruments categorized within level 3 of the fair value hierarchy of financial instruments measured at fair value as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
		Profit(loss) for the year		Other comprehensive income(loss)
		Favorable change	Unfavorable change	Favorable change      Unfavorable change
Securities measured at FVTPL (*1)	₩	50,112	(47,080)	-      -
Securities measured at FVOCI (*1)		-	-	36,873      (29,480)
Loans measured at FVTPL (*2)		10,372	(9,957)	-      -
Derivative financial assets (*2)		218	(217)	-      -
	₩	<u>60,702</u>	<u>(57,254)</u>	<u>36,873</u> <u>(29,480)</u>

<b>December 31, 2021</b>				
		Profit(loss) for the year		Other comprehensive income(loss)
		Favorable change	Unfavorable change	Favorable change      Unfavorable change
Securities measured at FVTPL (*1)	₩	8,690	(6,723)	-      -
Securities measured at FVOCI (*1)		-	-	43,861      (31,587)
Loans measured at FVTPL (*2)		9,041	(8,029)	-      -
Derivative financial assets (*2)		3,745	(3,728)	-      -
	₩	<u>21,476</u>	<u>(18,480)</u>	<u>43,861</u> <u>(31,587)</u>

- (\*1) Sensitivity amounts of equity securities are calculated by increasing and decreasing the correlations between the discount rates and the growth rates (0~1%) or the rate of increase in liquidation value (-1~1%) which are significant unobservable inputs. Sensitivity amounts for beneficiary certificates are calculated by increasing and decreasing the correlations between the discount rate of rent cash flow (-1~1%) and the rate of increase in property disposal price (-1~1%), only when they consist of real properties. Other than that, it is difficult to measure the sensitivity amounts of beneficiary certificates for practical reasons. Also, for financial instruments categorized within level 3 in 2022 and 2021, ₩18,704,023 million and ₩17,718,595 million, respectively, are excluded from the sensitivity disclosure because it is impossible to calculate the sensitivity due to changes in unobservable variables for practical reasons.
- (\*2) Sensitivity amounts of loans measured at FVTPL and derivatives financial instruments are calculated by increasing and decreasing the correlation coefficient and volatility (-10~10%) which are significant unobservable inputs.

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**45. Fair Value of Financial Assets and Liabilities, Continued**

(2) Fair value hierarchy of financial instruments measured at amortized cost

(i) The Bank's policies for measuring fair value of financial instruments at amortized costs are as follows:

- Cash and due from banks: Fair value of cash is considered equivalent to the carrying amount. In the case of due from banks on demand, which do not have a set maturity and can be realized instantly, the carrying amount is a close estimate of the fair value and is assumed so. In the case of other ordinary due from banks, the cash flow discount method is used to estimate the fair value.
- Securities measured at amortized cost: The fair value of securities measured at amortized cost is computed by widely-accepted appraisal agencies upon request.
- Loans measured at amortized cost: The fair value of loans measured at amortized cost is the expected future cash flows, reflecting premature redemption ratio, discounted by the market interest rate, adjusted by a spread sheet considering the probability of default. Exceptions to this method include loans with credit line facilities, loans with a maturity of three months or less left and impaired loans, which the Bank assumes the carrying amount as the fair value.
- Deposits: The fair value of deposits is computed using the discounted cash flow method. However, for deposits, whose cash flows cannot be estimated reasonably, the Bank assumes the carrying amount as the fair value.
- Borrowings: The fair value of industrial financial debentures is computed using the discounted cash flow method by the Bank's Fair Value Evaluation System. However, for borrowings including call money whose contractual maturity is three months or less, the Bank assumes the carrying amount as the fair value.
- Debentures: The fair value of industrial financial debentures is computed using the discounted cash flow method by the Bank's Fair Value Evaluation System.
- Other financial assets and liabilities: The fair value of other financial assets and liabilities is computed using the discounted cash flow method. However, in cases cash flow cannot be estimated reasonably, the Bank assumes the carrying amount as the fair value.

(ii) The fair value hierarchy of financial instruments measured at amortized cost as of December 31, 2022 and 2021 are as follows:

		December 31, 2022			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	7,088,563	4,450,243	-	11,538,806
Securities measured at amortized cost		2,964,285	3,391,599	-	6,355,884
Loans measured at amortized cost (*)		-	2,249,447	194,990,235	197,239,682
Other financial assets (*)		-	6,344,790	1,329,534	7,674,324
	₩	<u>10,052,848</u>	<u>16,436,079</u>	<u>196,319,769</u>	<u>222,808,696</u>
Financial liabilities:					
Deposits (*)	₩	-	2,271,579	65,998,390	68,269,969
Borrowings (*)		-	1,395,037	23,872,311	25,267,348
Debentures		-	158,228,192	-	158,228,192
Other financial liabilities (*)		-	2,836,258	3,868,478	6,704,736
	₩	<u>-</u>	<u>164,731,066</u>	<u>93,739,179</u>	<u>258,470,245</u>

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**45. Fair Value of Financial Assets and Liabilities, Continued**

		<b>December 31, 2021</b>			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	8,566,338	3,409,429	-	11,975,767
Securities measured at amortized cost		1,437,496	1,531,381	-	2,968,877
Loans measured at amortized cost (*)		-	653,340	170,486,002	171,139,342
Other financial assets (*)		-	5,097,270	738,178	5,835,448
	₩	<u>10,003,834</u>	<u>10,691,420</u>	<u>171,224,180</u>	<u>191,919,434</u>
Financial liabilities:					
Deposits (*)	₩	-	2,294,155	50,441,274	52,735,429
Borrowings (*)		-	861,402	21,183,763	22,045,165
Debentures		-	146,446,618	-	146,446,618
Other financial liabilities (*)		-	3,920,770	2,886,692	6,807,462
	₩	<u>-</u>	<u>153,522,945</u>	<u>74,511,729</u>	<u>228,034,674</u>

(\*) For financial instruments categorized as level 2, the carrying amount is considered as a reasonable approximation of the fair value and is thus, disclosed by fair value.

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**45. Fair Value of Financial Assets and Liabilities, Continued**

- (iii) Details of valuation technique and inputs used in the fair value measurement categorized within level 2 and level 3 of the fair value hierarchy of financial instruments measured at amortized cost as of December 31, 2022 and 2021 are as follows:

	<u>Valuation technique</u>	<u>Input</u>
Level 2		
Financial assets:		
Securities measured at amortized cost	Discounted cash flow method	Discount rate
Financial liabilities:		
Debentures	Discounted cash flow method	Discount rate
Level 3		
Financial assets:		
Loans measured at amortized cost	Discounted cash flow method	Credit spread, Other spread, Prepayment rate
Other financial assets	Discounted cash flow method	Other spread
Financial liabilities:		
Deposits	Discounted cash flow method	Other spread
Borrowings	Discounted cash flow method	Other spread
Other financial liabilities	Discounted cash flow method	Other spread

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46. Categories of Financial Assets and Liabilities

Categories of financial assets and liabilities as of December 31, 2022 and 2021 are as follows:

		December 31, 2022							
		Cash and cash equivalents	Financial instruments measured at FVTPL	Financial instruments designated at FVTPL	Financial instruments measured at FVOCI	Financial instruments designated at FVOCI	Financial instruments measured at amortized cost	Hedging purpose derivative instruments	Total
Financial assets:									
Cash and due from banks	₩	7,088,563	-	-	-	-	4,450,243	-	11,538,806
Securities measured at FVTPL		39,903	11,912,003	-	-	-	-	-	11,951,906
Securities measured at FVOCI		-	-	-	20,814,864	16,870,055	-	-	37,684,919
Securities measured at amortized cost		-	-	-	-	-	6,355,884	-	6,355,884
Loans measured at FVTPL		-	541,811	-	-	-	-	-	541,811
Loans measured at amortized cost		4,744,002	-	-	-	-	193,301,601	-	198,045,603
Derivative financial assets		-	9,609,026	-	-	-	-	185,429	9,794,455
Other financial assets		-	-	-	-	-	7,676,612	-	7,676,612
	₩	<u>11,872,468</u>	<u>22,062,840</u>	<u>-</u>	<u>20,814,864</u>	<u>16,870,055</u>	<u>211,784,340</u>	<u>185,429</u>	<u>283,589,996</u>
Financial liabilities:									
Financial liabilities									
measured at FVTPL	₩	-	-	1,469,724	-	-	-	-	1,469,724
Deposits		-	-	-	-	-	68,326,656	-	68,326,656
Borrowings		-	-	-	-	-	25,429,244	-	25,429,244
Debentures		-	-	-	-	-	158,711,896	-	158,711,896
Derivative financial liabilities		-	10,118,348	-	-	-	-	1,198,654	11,317,002
Other financial liabilities		-	-	-	-	-	6,717,731	-	6,717,731
	₩	<u>-</u>	<u>10,118,348</u>	<u>1,469,724</u>	<u>-</u>	<u>-</u>	<u>259,185,527</u>	<u>1,198,654</u>	<u>271,972,253</u>

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46. Categories of Financial Assets and Liabilities, Continued

		December 31, 2021							
		Cash and cash equivalents	Financial instruments measured at FVTPL	Financial instruments designated at FVTPL	Financial instruments measured at FVOCI	Financial instruments designated at FVOCI	Financial instruments measured at amortized cost	Hedging purpose derivative instruments	Total
Financial assets:									
Cash and due from banks	₩	8,566,338	-	-	-	-	3,409,429	-	11,975,767
Securities measured at FVTPL		-	9,818,811	-	-	-	-	-	9,818,811
Securities measured at FVOCI		-	-	-	18,994,503	18,880,633	-	-	37,875,136
Securities measured at amortized cost		-	-	-	-	-	2,968,877	-	2,968,877
Loans measured at FVTPL		-	644,412	-	-	-	-	-	644,412
Loans measured at amortized cost		887,238	-	-	-	-	169,876,156	-	170,763,394
Derivative financial assets		-	4,776,872	-	-	-	-	528,700	5,305,572
Other financial assets		-	-	-	-	-	5,836,048	-	5,836,048
	₩	<u>9,453,576</u>	<u>15,240,095</u>	<u>-</u>	<u>18,994,503</u>	<u>18,880,633</u>	<u>182,090,510</u>	<u>528,700</u>	<u>245,188,017</u>
Financial liabilities:									
Financial liabilities measured at									
FVTPL	₩	-	-	2,067,144	-	-	-	-	2,067,144
Deposits		-	-	-	-	-	52,792,121	-	52,792,121
Borrowings		-	-	-	-	-	22,063,777	-	22,063,777
Debentures		-	-	-	-	-	145,365,330	-	145,365,330
Derivative financial liabilities		-	4,501,378	-	-	-	-	256,463	4,757,841
Other financial liabilities		-	-	-	-	-	6,817,630	-	6,817,630
	₩	<u>-</u>	<u>4,501,378</u>	<u>2,067,144</u>	<u>-</u>	<u>-</u>	<u>227,038,858</u>	<u>256,463</u>	<u>233,863,843</u>

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**47. Offsetting of Financial Assets and Liabilities**

Details of financial instruments subject to offsetting, enforceable master netting agreements or similar agreements as of December 31, 2022 and 2021 are as follows:

December 31, 2022						
	Gross amounts of recognized financial asset	Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral received	
Derivative financial assets (*) ₩	9,794,455	-	9,794,455	5,814,449	71,536	3,908,470
Unsettled spot exchange receivables (*)	2,597,457	-	2,597,457	2,593,577	-	3,880
Unsettled domestic exchange receivables	6,008,639	2,261,306	3,747,333	-	-	3,747,333
Security pledged as collateral for repurchase agreements	2,373,401	-	2,373,401	57,619	-	2,315,782
Reverse repurchase agreements	2,240,000	-	2,240,000	2,240,000	-	-
Loaned securities	-	-	-	-	-	-
Receivables from securities transaction	11,940	-	11,940	11,940	-	-
₩	23,025,892	2,261,306	20,764,586	10,717,585	71,536	9,975,465

December 31, 2022						
	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amounts
				Financial instruments	Cash collateral pledged	
Derivative financial liabilities (*) ₩	11,317,002	-	11,317,002	5,552,654	501	5,763,847
Unsettled spot exchange payables (*)	2,593,992	-	2,593,992	2,593,577	-	415
Unsettled domestic exchange payables	2,503,572	2,261,306	242,266	-	-	242,266
Repurchase agreements	57,619	-	57,619	57,619	-	-
Payables from securities transaction	18,305	-	18,305	18,305	-	-
₩	16,490,490	2,261,306	14,229,184	8,222,155	501	6,006,528

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47. **Offsetting of Financial Assets and Liabilities, Continued**

December 31, 2021						
		Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Related amounts not set off in the statement of financial position		
	Gross amounts of recognized financial asset			Financial instruments	Cash collateral received	Net amounts
Derivative financial assets (*)	₩ 5,305,572	-	5,305,572	3,485,084	19,412	1,801,076
Unsettled spot exchange receivables (*)	3,302,464	-	3,302,464	3,300,991	-	1,473
Unsettled domestic exchange receivables	3,502,263	1,707,457	1,794,806	-	-	1,794,806
Security pledged as collateral for repurchase agreements	3,349,080	-	3,349,080	1,307,268	-	2,041,812
Reverse repurchase agreements	790,000	-	790,000	790,000	-	-
Loaned securities Receivables from securities transaction	417,640	-	417,640	417,640	-	-
	12,553	-	12,553	12,553	-	-
	₩ 16,679,572	1,707,457	14,972,115	9,313,536	19,412	5,639,167

December 31, 2021						
		Gross amounts of recognized financial liabilities	Gross amounts of financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position	
					Financial instruments	Cash collateral pledged
						Net amounts
Derivative financial liabilities (*)	₩	4,757,841	-	4,757,841	2,988,272	105,989
Unsettled spot exchange payables (*)		3,303,324	-	3,303,324	3,300,991	-
Unsettled domestic exchange payables		2,324,903	1,707,457	617,446	-	-
Repurchase agreements		1,307,268	-	1,307,268	1,307,268	-
Payables from securities transaction		10,036	-	10,036	10,036	-
	₩	11,703,372	1,707,457	9,995,915	7,606,567	105,989

(\*) For the derivatives covered by the ISDA derivative contracts, all contracts are settled and the net amount of derivative contracts is measured and paid based on the liquidation value if the counterparty files for bankruptcy or has any credit issues.

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**48. Operating Segments**

- (1) The Bank has four reportable segments, as described below, which are the Bank's strategic business units. They are managed separately because each business requires different technology and marketing strategies. The following summary describes general information about each of the Bank's reportable segments:

<b>Segments</b>	<b>General information</b>
Corporate finance	Provides trade finance and loans to corporate customers
Investment finance	Provides consulting services to corporate such as capital finance, restructuring, etc.
Asset management	Provides asset management services to individual and corporate customers
Others	Any other segment not mentioned above

- (2) Operating income (loss) from external customers and among operating segments for the years ended December 31, 2022 and 2021 are as follows:

		<b>2022</b>				
		Corporate finance	Investment finance	Asset management	Others	Total
Operating income (loss) from external customers	₩	594,063	(2,363,552)	32,111	3,495,076	1,757,698
Operating income (loss) from intersegment sales		(13,094)	2,134,556	-	(2,121,462)	-
	₩	<u>580,969</u>	<u>(228,996)</u>	<u>32,111</u>	<u>1,373,614</u>	<u>1,757,698</u>
		<b>2021</b>				
		Corporate finance	Investment finance	Asset management	Others	Total
Operating income (loss) from external customers	₩	(65,255)	1,848,863	20,821	1,745,727	3,550,156
Operating income (loss) from intersegment sales		5,536	754,438	-	(759,974)	-
	₩	<u>(59,719)</u>	<u>2,603,301</u>	<u>20,821</u>	<u>985,753</u>	<u>3,550,156</u>

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**48. Operating Segments, Continued**

(3) Details of segment results for the Bank's reportable segments for the years ended December 31, 2022 and 2021 are as follows:

		2022				
		Corporate finance	Investment finance	Asset management	Others	Total
Net interest income	₩	871,204	(463,883)	9,421	1,327,073	1,743,815
Non-interest income						
Income related to securities (*1)		(17,602)	(136,455)	-	57,440	(96,617)
Other non-interest income		512,907	778,927	36,350	2,377	1,330,561
		495,305	642,472	36,350	59,817	1,233,944
Provision for loan losses and others (*2)		(42,977)	(297,286)	-	(3,427)	(343,690)
General and administrative expenses		(742,563)	(110,299)	(13,660)	(9,849)	(876,371)
Operating income	₩	580,969	(228,996)	32,111	1,373,614	1,757,698
		2021				
		Corporate finance	Investment finance	Asset management	Others	Total
Net interest income	₩	1,181,060	(158,369)	2,328	633,590	1,658,609
Non-interest income						
Income related to securities (*1)		63,729	17,194	-	26,604	107,527
Other non-interest income		602,798	2,807,533	36,448	(23,092)	3,423,687
		666,527	2,824,727	36,448	3,512	3,531,214
Provision for loan losses and others (*2)		(924,878)	95,316	-	5,641	(823,921)
General and administrative expenses		(982,428)	(158,373)	(17,955)	343,010	(815,746)
Operating income	₩	(59,719)	2,603,301	20,821	985,753	3,550,156

(\*1) Income related to securities is composed of net gain (loss) on securities measured at FVTPL, securities measured at FVOCI and securities measured at amortized cost.

(\*2) Provision for loan losses and others comprises of provision for loan losses, provision for derivative credit risks, gains (losses) on sales of loans, and increase (reversal) of provision.

(4) Geographical revenue information about the Bank's operating segments for the years ended December 31, 2022 and 2021 and the geographical non-current asset information as of December 31, 2022 and 2021 are as follows:

		Revenues (*1)		Non-current assets (*2)	
		2022	2021	December 31, 2022	December 31, 2021
Domestic	₩	47,753,159	31,511,510	28,918,343	29,704,702
Overseas		2,198,448	776,644	86,363	108,076
	₩	49,951,607	32,288,154	29,004,706	29,812,778

(\*1) Revenues consist of interest income, fees and commission income, dividend income, income related to securities, gain on derivatives, foreign currency transaction gain, other operating income and provision for loan losses.

(\*2) Non-current assets consist of investments in subsidiaries and associates, property and equipment, investment property and intangible assets.

#### 49. **Risk Management**

##### **(1) Introduction**

###### ***(i) Objectives and principles***

The Bank's risk management aims to maintain financial soundness and effectively manage various risks pertinent to the nature of the Bank's business. The Bank has set up and fulfilled policies to manage risks timely and effectively. Pursuant to the policies, the Bank's risks shall be

- managed comprehensively and independently,
- recognized timely, evaluated exactly and managed effectively,
- maintained to the extent that the risks balance with profit,
- diversified appropriately to avoid concentration on specific segments,
- managed to prevent excessive exposure by the setting up and managing of tolerance limits and guidelines.

###### ***(ii) Risk management strategy and process***

The Bank's risk management business is separated into two different stages; the 'metrification stage,' in which risks are estimated and monitored, and the 'integration stage,' in which information gained during the risk management process is integrated and used in management strategies. Risk management is recognized as a key component of the Bank's management and seeks to change from its previously adaptive and limited role to more leading and comprehensive role.

Furthermore, the Bank focuses on consistent communication among different departments to establish a progressive consensus on risk management.

###### ***(iii) Risk management governance***

###### *Risk Management Committee*

The Bank's Risk Management Committee (the "Committee") is composed of the President of the committee (an outside director), and three other commissioners. The Committee functions to establish policies of risk management, evaluate the capital adequacy of the Bank, discuss material issues relating to risk management, and present preliminary decisions on such matters.

###### *The CEO of the Bank and the head of Risk Management Segment*

The CEO of the Bank, according to the policies of risk management, performs his or her role to manage and direct risk management to sustain efficiency and internal control. The head of the Risk Management Segment is responsible for supervising the overall administration of the Bank's risk management business and providing risk-related information to members of the board of directors and the Bank's management.

###### *Risk Management Policy Committee*

The Bank's Risk Management Policy Committee is composed of the leaders of all business segments. and exercises its role to decide important matters relating to the Bank's portfolio including allocating internal capital limits by segment and setting exposure limits by industry within the scope that Risk Management Committee regulated.

###### ***(iv) Performance of risk management committee***

The Risk Management Committee performs comprehensive reviews of all the affairs related to risk management and deliberates the decisions of the board of directors. For the year ended December 31, 2022, the key activities of the Risk Management Committee are as follows:

- Major decision
  - Risk management plan for 2022
  - Contingency funding plan for 2022
  - Setting and managing exposure limits by country for 2022
  - Increase of internal capital limit for interest rate risk of Korean won

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**49. Risk Management, Continued**

- Major reporting
  - Result of integrated crisis analysis for the second half of 2021
  - Resolution of Credit Committee for the fourth quarter of 2021
  - Result of ex-post validation of credit rating system and default rates, and verification of risk measurement factors for internal purposes
  - Setting management limit of credit portfolios of 2022
  - Allocation of internal capital limits of 2022
  - Resolution of Credit Committee for the first quarter of 2022
  - Changes the period of the additional allowance for loan losses for COVID-19 forbearance companies
  - Increase of industry limits for feed manufacturing considering external factors
  - Result of operation of corporate credit rating system in 2022
  - Result of integrated crisis analysis for the first half of 2022
  - Resolution of Credit Committee for the second quarter of 2022
  - Verification of risk-weighted assets for BIS ratio as of December 31, 2021
  - Review of the outlook and management plan for the BIS ratio
  - Result of assessment of suitability for internal capital for 2022
  - Result of BCP training for 2022
  - Result of integrated crisis analysis for the second half of 2022
  - Resolution of Credit Committee for the third quarter of 2022

**(v) Improvement of risk management system**

For the continuous improvement of risk management, financial soundness and capital adequacy, the Bank performs the following:

- Continuous improvement of Basel
  - Improvements in the internal capital adequacy assessment system, in line with the guidelines set by the Financial Supervisory Service (FSS) in 2008, to manage capital adequacy more effectively
  - Improvements in the credit assessment system on Low Default Portfolio (LDP)
  - Elaboration of risk measuring criteria including credit risk parameters and measurement logics
  - Development of the application system for timely calculation of LCR and NSFR
  - Rebuilding the Corporate Credit Rating System (approved by Financial Supervisory Services on October 26, 2017)
  - Establishment of the system to calculate Basel Interest Rate Risk in the Banking Book coming to domestic in September 2018
  - Establishment of the system to comply with the amended regulation relating to risk-weighted assets under Basel III in December 2020
  - Development of system related to Fundamental Review of the Trading Book (FRTB) under Basel III in August 2022
  - Development of system related to operational risk under Basel III in September 2022
- Expansion of risk management infrastructure
  - Establishment of the RAPM system to reflect risks to the Bank's business and support decision-making upon management, and application of performance assessment at the branch level since 2010
  - Enforcement of risk management related to irregular compound derivatives and validation of the derivative pricing model developed by the Bank's Front Office
  - Establishment of IFRS 9 accounting system to calculate a loan loss allowances under IFRS 9 in March 2017 and, since then, run of IFRS 9 accounting system in January 2018

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**49. Risk Management, Continued**

**(vi) Risk management reporting and measuring system**

The Bank endeavours consistently to objectively and rationally measure and manage all significant risks considering the characteristics of operational areas, assets and risks. In relation to reporting and measurement, the Bank has developed application systems as follows:

Application system	Approach	Completion date	Major function
Corporate Credit Rating System	Logit Model	Oct. 2017	Rebuilding the Corporate Credit Rating System
Market Risk Management System	Risk Watch	Jun. 2002	Summarize position, manage exposure limits and calculate Market VaR
	RS Model	Feb. 2019	Calculate regulatory capital by Standardized Approach
	Murex M/O	Sep. 2012	Supplement of RiskWatch to calculate VaR
Interest/Liquidity Risk Management System	In-house	Apr. 2013	Supplement of RiskWatch to calculate VaR
Operational Risk Management System	Standardized Approach	May. 2019	Calculation of interest risk, liquidity risk, etc.
BIS Capital Ratio Calculation/Credit Risk Measurement System	Fermat RaY (*)	May. 2006	Manage process and calculate CSA, KRI and OP VaR, etc.
Loan Loss Allowance Calculation System	IFRS	Sep. 2006	Calculate equity, credit risk-weighted assets and credit risk, etc.
	IFRS 9	Dec. 2013	Calculate equity, credit risk-weighted assets and credit risk, etc.
Loan Loss Allowance Calculation System	IFRS	Jan. 2011	Incurred loss model
	IFRS 9	Mar. 2017	Expected loss model

(\*) To comply with the amended regulation relating to risk-weighted assets under Basel III, the upgrade of relevant systems was completed in March 2021.

**(vii) Response to Basel**

The Korean financial authorities have implemented Basel II since January 2008, and the Standardized Approach and the Foundation Internal Ratings-Based Approach for calculating credit risk are applicable.

In conformity with the implementation roadmap of Basel II, the Bank obtained the approval to use the Foundation Internal Ratings-Based Approach on credit risk from the FSS in July 2008 and has applied the approach since late June 2008. The Bank applies the Standardized Approach on market risks and operational risks.

The Bank completed the Basel III standard risk management system in preparation of the adoption of the Basel III regulations announced on December 1, 2013. Starting from 2013 year-end, the BIS capital adequacy ratio has been measured in accordance to the Basel III regulations.

Responding to the requirements of the financial authorities, the Bank recognizes interest rate risk, liquidity risk, credit bias risk and reputation risk besides Pillar I risks (credit risk, market risk and operational risk). The Bank has actively responded to the Pillar 2 regulation, including additional capital requirements based on comprehensive assessment of risk management levels since 2015. In addition, from the end of 2015, the Bank has applied the uniform standards for the public announcement of financial business for Basel compliance.

The Bank completed revised standards such as capital requirements for banks' investments in funds in 2017, capital requirements for securitization in 2018, and the Standardised Approach for measuring counterparty credit risk (SA-CCR) in 2019.

To comply with the amended regulation relating to risk-weighted assets under Basel III, the Bank completed the consultation and the development of the relevant systems and the amended regulation has been applied since the calculation of the BIS ratio at the end of 2020.

The Bank has completed IT consulting and system development related to Market Risk Regulation (Fundamental Review of the Trading Book, FRTB) and Operational Risk Regulation under Basel III during the second half of 2022, and plans to respond to the regulatory changes smoothly starting from 2023.

**49. Risk Management, Continued**

***(viii) Internal capital adequacy assessment process***

Internal capital adequacy assessment process is defined as the process that the Bank aggregates significant risks, calculates its internal capital, compares the internal capital with the available capital and assesses its internal capital adequacy. The internal capital adequacy report including the assessment results at the end of the year is prepared and reported to the Risk Management Policy Committee.

**- Internal capital adequacy assessment**

For the internal capital adequacy assessment, the Bank calculates its aggregated internal capital by evaluating all significant risks and available capital considering the quality and components of capital, and then assesses the internal capital adequacy by comparing the aggregated internal capital with the available capital.

In addition, the Bank conducts periodic stress tests more than once every six months to assess potential weakness in crisis situations and uses its results to assess the internal capital adequacy. The Bank assumes the macroeconomic situation as three stages of ‘normal- pessimistic-serious’ and is preparing countermeasures such as checking the adequacy of capital by each stage.

**- Goal setting of internal capital management**

The Bank sets up and manages an internal capital limit on an annual basis, through the approval of the Risk Management Committee, to maintain internal capital adequacy by managing internal capital (integrated risks) within the extent of available capital.

The prior year’s internal capital, analysis of domestic and foreign environment changes in the current year, and the direction and size of operations are all reflected in the goal setting of internal capital management to calculate the integrated internal capital scale. Moreover, Bank for International Settlements(BIS) capital adequacy ratio and risk appetite are taken into consideration in the goal setting of internal capital management.

**- Allocation of internal capital**

The Bank’s Risk Management Committee approves entire internal capital and the Risk Management Policy Committee allocates the capital to each segment and department, considering the extent of possible risk faced and size of operations. The allocated internal capital is monitored regularly and managed using various management methods. The results of monitoring and managing the allocated internal capital are reported to the Risk Management Committee. In case of any material changes in the Bank’s business plan or risk operation strategy, the Bank adjusts the allocations elastically.

**- Composition of internal capital**

Internal capital comprises all the significant risks of the Bank and is composed of quantifiable and non-quantifiable risks. Quantifiable risks are composed of credit risk, market risk, interest rate risk, operational risk and credit concentration risk, foreign currency settlement risk, and are risks measured quantitatively by applying reasonable methodology using objective data. Non-quantifiable risks are composed of strategy risk, reputation risk, residual risk on asset securitization and furthermore. Non-quantifiable risks are those risks that cannot be measured quantitatively because of lack of data or the absence of appropriate measuring methodologies.

**(2) Credit Risk**

***(i) Concept***

Credit risk can be defined as potential loss resulting from the refusal to perform obligations or default of counterparties. More generally, it is used to refer to the possibility of loss from engaged bonds that cannot be redeemed properly or from substitute payments.

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49. **Risk Management, Continued**

*(ii) Approach to credit risk management*

*Summary of credit risk management*

The Bank regards credit risk as the most significant risk area in its business operations, and accordingly, closely monitors its credit risk exposure. The Bank manages both credit risks at portfolio level and at individual credit level. At portfolio level, the Bank reduces credit concentration and restructures the portfolio in such a way to maximize profitability considering the risk level. To avoid credit concentration on a particular sector, the Bank manages credit limits by client, group, and industry. The Bank also resets exposure management directives for each industry by conducting an industry credit evaluation twice a year.

At the individual credit level, the relationship manager (RM), the credit officer (CO) and the Credit Review Committee manage each borrower's credit risk.

*Post management and insolvent borrower management*

The Bank monitors the borrower's credit rating from the date of the loan to the date of the final collection of debt consistently and inspects the borrower's status frequently to prevent the generation of new bad debts and to stabilize the number of debt recoveries.

In addition, an early warning system is operated to spot borrowers that are highly likely to be insolvent. The early warning system provides financial information, financial transaction information, public information and market information of the borrower, and such information is used by the RM and the CO to monitor and manage changes in the borrower's credit rating.

A borrower that is likely to be insolvent is classified as an early warning borrower, depending on the level of insolvency risk. The Bank sets up a specific and applicable stabilization plan for such a borrower considering the borrower's characteristics. Furthermore, sub-standard borrowers are classified as insolvent borrowers, and are managed intensively by the Bank, which takes legal proceedings, disposals or corporate turnaround measures if necessary.

*Classification of asset soundness and provision of allowance for loss*

Classification of asset soundness is fulfilled by the analysis and assessment of credit risk. The classification is used to provide an appropriate allowance, prevent further occurrences of insolvent assets and promote the normalization of existing insolvent assets to enhance the stabilization of asset operations.

Based on the Financial Supervisory Regulations of the Republic of Korea, the Bank has established standards and guidelines on the classification of asset soundness, according to the Forward-Looking Criteria, which reflects not only the borrower's past records of repayment but also their future debt repayment capability.

In conformity with these standards, the Bank classifies the soundness of its assets as "normal", "precautionary", "substandard", "doubtful", or "estimated loss" and differentiates the coverage ratio by the level of classification.

Details of loans by credit rating as of December 31, 2022 and 2021 are as follows:

< Corporate >

		December 31, 2022		
		12-month expected credit loss	Lifetime expected credit losses	
Carrying amounts			Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 169,982,892	150,604,520	19,378,372	-
BBB2 ~ CCC	30,582,238	8,314,570	20,210,063	2,057,605
Below CC	1,283,425	-	52,693	1,230,732
	₩ 201,848,555	158,919,090	39,641,128	3,288,337

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49. **Risk Management, Continued**

December 31, 2021				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 138,451,664	123,087,995	15,363,669	-
BBB2 ~ CCC	34,125,651	11,317,394	21,134,914	1,673,343
Below CC	2,133,285	-	12,670	2,120,615
	₩ 174,710,600	134,405,389	36,511,253	3,793,958

< Retail >

December 31, 2022				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Grade 1~ Grade 6	₩ 181,023	173,381	7,642	-
Grade 7~ Grade 8	2,116	-	2,084	32
Grade 9~ Grade 10	536	-	-	536
	₩ 183,675	173,381	9,726	568

December 31, 2021				
	Carrying amounts	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Grade 1~ Grade 6	₩ 203,299	192,455	10,838	6
Grade 7~ Grade 8	2,709	-	2,701	8
Grade 9~ Grade 10	572	-	-	572
	₩ 206,580	192,455	13,539	586

Details of payment guarantees (including financial guarantees) and unused commitments by credit rating as of December 31, 2022 and 2021 are as follows:

< Corporate >

December 31, 2022				
	Exposures	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Unused commitments:				
AAA ~ BBB1	₩ 42,065,612	38,276,358	3,789,254	-
BBB2 ~ CCC	5,108,112	1,943,066	3,112,816	52,230
Below CC	-	-	-	-
	₩ 47,173,724	40,219,424	6,902,070	52,230
Payment guarantees (including financial guarantees):				
AAA ~ BBB1	₩ 6,921,986	6,008,602	913,384	-
BBB2 ~ CCC	9,773,163	4,598,273	3,826,826	1,348,064
Below CC	12,110	-	154	11,956
	₩ 16,707,259	10,606,875	4,740,364	1,360,020

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49. **Risk Management, Continued**

<b>December 31, 2021</b>				
	Exposures	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Unused commitments:				
AAA ~ BBB1	₩ 37,276,730	34,822,879	2,453,851	-
BBB2 ~ CCC	9,237,945	5,814,835	3,369,595	53,515
Below CC	-	-	-	-
	₩ 46,514,675	40,637,714	5,823,446	53,515
Payment guarantees (including financial guarantees):				
AAA ~ BBB1	₩ 6,396,425	5,700,522	695,903	-
BBB2 ~ CCC	6,890,993	3,303,869	3,064,270	522,854
Below CC	665,845	-	-	665,845
	₩ 13,953,263	9,004,391	3,760,173	1,188,699

< Retail >

<b>December 31, 2022</b>				
	Exposures	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Unused commitments:				
Grade 1~ Grade 6	₩ 32,230	31,779	451	-
Grade 7~ Grade 8	20	-	20	-
Grade 9~ Grade 10	-	-	-	-
	₩ 32,250	31,779	471	-

<b>December 31, 2021</b>				
	Exposures	12-month expected credit loss	Lifetime expected credit losses	
			Non credit- impaired	Credit- impaired
Unused commitments:				
Grade 1~ Grade 6	₩ 76,448	75,950	498	-
Grade 7~ Grade 8	9	-	9	-
Grade 9~ Grade 10	-	-	-	-
	₩ 76,457	75,950	507	-

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49. **Risk Management, Continued**

***(iii) Measurement methodology of credit risk***

Pursuant to Basel III, the Bank selects the measurement methodology of credit risk considering the complexity of measurement, measurement factors, estimating methods and others. Measurement approaches are divided into Standardized Approach and Internal Ratings-Based Approach.

***Standardized Approach (“SA”)***

In the case of the Standardized Approach, the risk weights are applied according to the credit rating assessed by External Credit Assessment Institution (“ECAI”). Risk weights in each credit rating are as follows:

Credit rating	Corporate	Country	Bank
AAA ~ AA-	20.0%	0.0%	20.0%
A+ ~ A-	50.0%	20.0%	30.0%
BBB+ ~ BBB-	75.0%	50.0%	50.0%
BB+ ~ BB-	100.0%	100.0%	100.0%
B+ ~ B-	150.0%	100.0%	100.0%
Below B-	150.0%	150.0%	150.0%
Unrated	100.0% (*)	100.0%	Rating based on due diligence

(\*) In case of small and medium-sized business, 85.0% is applied.

The OECD is designated as foreign ECAI and Korea Investors Service Co., Ltd., NICE Investors Services Co., Ltd. and the Korea Ratings Co., Ltd. are designated as domestic ECAI.

The Bank applies the credit rating based on the corresponding loan and same borrower’s unsecured senior loans. In the case the borrower’s risk weight is higher than the unrated exposure’s risk weight (100%), the higher weight is applied. In the case the borrower has more than one rating, the higher weight of the two lowest weights (Second Best Criteria) is applied.

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**49. Risk Management, Continued**

*Internal Ratings-Based Approach (IRB)*

To use the Internal Ratings-Based Approach, a bank must be approved by the FSS and should also meet the requirement pre-set by the FSS.

In relation to Basel II that has been adopted domestically as of January 2008, the Bank gained approval from the FSS to use the Foundation Internal Ratings-Based Approach in July 2008. The Bank has calculated credit risk-weighted assets using the approach since late June 2008.

*Measurement method of credit risk-weighted asset*

The Bank calculates credit risk-weighted assets of corporate exposures and asset securitization exposures using the Foundation Internal Ratings-Based Approach as of December 31, 2022.

The Standardized Approach is applied to country exposures, public institution exposures and bank exposures permanently and applied to overseas subsidiary and the Bank's branch pursuant to prior consultation with the FSS.

<Approved measurement method>

Measurement method		Exposure
Standardized Approach	Permanent SA	- Countries, public institutions, banks, equity
	SA	- Overseas subsidiaries and branches, and other assets, retail, residential mortgage, commercial properties
Foundation Internal Ratings-Based Approach		- Corporate, small and medium enterprises, asset securitization (at each credit level)
Application of IRB by phase		- Special lending, non-residence and others

The mitigated effect of credit risks reflects the related policies which consider eligible collateral and guarantees. The Bank calculates the credit risk-weighted assets using the capital adequacy ratio.

Upon the calculation of credit risk-weighted assets for derivatives, the Bank takes into consideration the set-off effects of transactions under legally enforceable rights to set-off to calculate exposures.

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**49. Risk Management, Continued**

*Credit rating model*

The results of credit rating are presented as grades through an assessment of the debt repayment capacity that the principal and interest of debt securities or loans are redeemed while complying with contractual redemption schedule.

Using the Bank's internal credit rating model, the Bank classifies debtors' credit rating into 14 grades (AAA~D). To distinguish the difference between credits in the same grade, the Bank uses 20 stages as auxiliaries to 14 grades.

The Bank's regular credit rating process is carried out once a year and in the case of the change of debtor's credit condition, the credit rating is frequently adjusted as necessary to retain the adequacy of credit rating.

The results of credit rating are applied to various areas such as discrimination of loan processes, loan limit, loan interest rate, post loan management standard process, credit risk measurement, and allowance for loan losses assessment.

*Credit rating process control structure*

According to the Principle of Checks and Balances, the Bank has established the credit rating process control structure by which the credit rating system operates appropriately.

- Independent assessment of credit rating: The Bank's business segment (RM) and credit rating assessment segment (SRO) are independently operated.
- Independent control of credit rating system: The control of credit rating system including the development of credit rating model is independently implemented by the Bank's Risk Management Department.
- Independent verification of credit rating system: Credit rating system is independently verified by Risk Validation Team of the Financial Planning Department.
- Internal audit of credit rating process: Credit rating process is audited by the Bank's internal audit department.
- Role of the Board of Directors and the Bank's management: Major issues relating to credit process are approved by the Board of Directors and are regularly monitored by the Bank's top management.

The Bank reviews debt serviceability based on a credit analysis when handling loans. Depending on the results, credit loan preservation is adjusted as necessary using such methods as interest rate preservation due to credit risk.

The Bank evaluates the value of the collateral, performing ability and legal validity of the guarantee at the initial acquisition. The Bank re-evaluates the provided collateral and guarantees regularly for them to be reasonably preserved.

For guarantees, the Bank demands a corresponding written guarantee according to loan handling standards and the guarantor's credit rating is independently calculated when in conformance with the credit rating endowment method.

The quantification of the extent to which collateral and other credit enhancements mitigate credit risk of impaired financial assets as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Securities measured at FVOCI	₩ 72,739	71,668
Loans measured at amortized cost	3,345,216	3,849,967
Other assets	14,221	26,488

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49. **Risk Management, Continued**

(iv) *Credit exposure*

Geographical information of credit exposure as of December 31, 2022 and 2021 are as follows:

		December 31, 2022									
		Korea	Hong Kong	Ireland	Uzbekistan	Brazil	Hungary	UK	USA	Others	Total
Due from banks (excluding due from BOK)	₩	1,449,224	1,405,648	-	38,019	87,444	365,514	536,418	3,329,355	1,031,286	8,242,908
Securities measured at FVOCI:											
Bonds (excluding government bonds)		13,531,541	241,512	12,533	-	-	-	297,115	4,953,262	2,807,821	21,843,784
Loans		164,692,863	1,913,983	1,534,814	687,498	339,476	929,402	1,471,985	5,616,327	44,228,252	221,414,600
Derivative financial assets		108,797	3,572	-	-	-	-	8,681	18,656	45,771	185,477
Other assets		1,559,148	-	-	-	-	-	-	-	6,233,425	7,792,573
		181,341,573	3,564,715	1,547,347	725,517	426,920	1,294,916	2,314,199	13,917,600	54,346,555	259,479,342
Guarantees (including financial guarantees)		16,226,813	-	-	-	-	48,285	-	241,660	190,503	16,707,261
Commitments		42,293,299	166,993	110,971	-	126,730	20,268	416,056	2,281,667	1,789,989	47,205,973
		58,520,112	166,993	110,971	-	126,730	68,553	416,056	2,523,327	1,980,492	63,913,234
₩		239,861,685	3,731,708	1,658,318	725,517	553,650	1,363,469	2,730,255	16,440,927	56,327,047	323,392,576

		December 31, 2021									
		Korea	Hong Kong	Ireland	Uzbekistan	Brazil	Hungary	UK	USA	Others	Total
Due from banks (excluding due from BOK)	₩	749,525	1,402,014	-	-	59,275	353,577	82,528	2,898,169	640,657	6,185,745
Securities measured at FVOCI:											
Bonds (excluding government bonds)		8,109,726	302,189	21,711	-	-	-	266,248	3,862,898	2,297,025	14,859,797
Loans		135,447,184	1,301,443	941,965	536,160	312,567	433,149	999,688	2,322,372	28,337,321	170,631,849
Derivative financial assets		174,859	45,847	-	-	-	-	3,922	80,543	223,656	528,827
Other assets		5,803,336	-	-	-	-	-	-	-	121,422	5,924,758
		150,284,630	3,051,493	963,676	536,160	371,842	786,726	1,352,386	9,163,982	31,620,081	198,130,976
Guarantees (including financial guarantees)		13,270,467	-	-	-	-	45,169	-	347,919	289,708	13,953,263
Commitments		39,836,375	85,880	148,185	-	-	11,902	774,783	979,541	4,754,466	46,591,132
		53,106,842	85,880	148,185	-	-	57,071	774,783	1,327,460	5,044,174	60,544,395
₩		203,391,472	3,137,373	1,111,861	536,160	371,842	843,797	2,127,169	10,491,442	36,664,255	258,675,371

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49. **Risk Management, Continued**

Industry information of credit exposure as of December 31, 2022 and 2021 are as follows:

		<b>December 31, 2022</b>			
		<b>Manufacturing</b>	<b>Service</b>	<b>Others</b>	<b>Total</b>
Due from banks (excluding due from BOK)	₩	-	7,636,352	606,556	8,242,908
Securities measured at FVOCI:					
Bonds (excluding government bonds)		3,642,461	14,432,050	3,769,273	21,843,784
Loans		84,698,134	117,538,177	19,178,289	221,414,600
Derivative financial assets		-	185,477	-	185,477
Other assets		244,043	468,531	7,079,999	7,792,573
		<u>88,584,638</u>	<u>140,260,587</u>	<u>30,634,117</u>	<u>259,479,342</u>
Guarantees (including financial guarantees)		14,244,265	2,070,682	392,314	16,707,261
Commitments		22,153,544	23,477,561	1,574,868	47,205,973
		<u>36,397,809</u>	<u>25,548,243</u>	<u>1,967,182</u>	<u>63,913,234</u>
	₩	<u>124,982,447</u>	<u>165,808,830</u>	<u>32,601,299</u>	<u>323,392,576</u>
		<b>December 31, 2021</b>			
		<b>Manufacturing</b>	<b>Service</b>	<b>Others</b>	<b>Total</b>
Due from banks (excluding due from BOK)	₩	-	5,529,904	655,841	6,185,745
Securities measured at FVOCI:					
Bonds (excluding government bonds)		2,597,917	9,614,360	2,647,520	14,859,797
Loans		73,076,518	82,852,716	14,702,615	170,631,849
Derivative financial assets		-	528,827	-	528,827
Other assets		121,251	227,172	5,576,335	5,924,758
		<u>75,795,686</u>	<u>98,752,979</u>	<u>23,582,311</u>	<u>198,130,976</u>
Guarantees (including financial guarantees)		10,588,505	3,012,831	351,927	13,953,263
Commitments		21,238,777	22,162,715	3,189,640	46,591,132
		<u>31,827,282</u>	<u>25,175,546</u>	<u>3,541,567</u>	<u>60,544,395</u>
	₩	<u>107,622,968</u>	<u>123,928,525</u>	<u>27,123,878</u>	<u>258,675,371</u>

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49. **Risk Management, Continued**

The detail of credit exposures by industry affected by the pandemic of COVID-19 as of December 31, 2022 and 2021 are as follows and the exposures by industries could be changed according to economic fluctuations.

December 31, 2022											
		Due from banks (excluding due from BOK)	Securities measured at FVOCI Bonds (excluding government bonds)	Loans	Derivative financial assets	Other assets	Subtotal	Guarantees (including financial guarantees)	Commit- ments	Subtotal	Total
Manufacturing:											
Display	₩	-	-	1,289,473	-	5,100	1,294,573	382	33,564	33,946	1,328,519
Semiconductor		-	226,042	4,267,310	-	16,770	4,510,122	152,023	1,564,613	1,716,636	6,226,758
/Mobile phone		-	325,472	12,191,177	-	29,695	12,546,344	580,123	1,716,017	2,296,140	14,842,484
Automotive		-	1,077,431	18,430,754	-	60,552	19,568,737	201,296	6,409,868	6,611,164	26,179,901
Refinery/Chemical		-	182,739	10,022,074	-	22,002	10,226,815	650,497	2,873,421	3,523,918	13,750,733
/Energy		-	1,830,777	38,497,346	-	109,924	40,438,047	12,659,944	9,556,061	22,216,005	62,654,052
Steel/Metal		-	3,642,461	84,698,134	-	244,043	88,584,638	14,244,265	22,153,544	36,397,809	124,982,447
Others		-	-	-	-	-	-	-	-	-	-
Service:											
Air transportation		-	5,624	3,085,579	-	13,785	3,104,988	221,159	3,000	224,159	3,329,147
Sea transportation		-	-	2,493,475	-	31,018	2,524,493	78,278	374,025	452,303	2,976,796
Other		-	166,659	8,724,268	-	23,326	8,914,253	16,597	2,583,356	2,599,953	11,514,206
transportation		-	-	12,277	-	59	12,336	-	1,700	1,700	14,036
Leisure/Travel		-	11,589	2,043,522	-	4,873	2,059,984	39,249	347,915	387,164	2,447,148
industry		-	-	563,657	-	1,672	565,329	7,127	112,440	119,567	684,896
Food/Accommoda		-	-	-	-	-	-	-	-	-	-
-tion		-	-	-	-	-	-	-	-	-	-
Automotive-		-	-	-	-	-	-	-	-	-	-
related		-	-	-	-	-	-	-	-	-	-
Finance/Insurance		-	-	-	-	-	-	-	-	-	-
and others		-	-	-	-	-	-	-	-	-	-
		7,636,352	14,248,178	100,615,399	185,477	393,798	123,079,204	1,708,272	20,055,125	21,763,397	144,842,601
		7,636,352	14,432,050	117,538,177	185,477	468,531	140,260,587	2,070,682	23,477,561	25,548,243	165,808,830
Other:											
Construction		-	285,970	4,067,049	-	8,889	4,361,908	348,557	1,561,312	1,909,869	6,271,777
Others		606,556	3,483,303	15,111,240	-	7,071,110	26,272,209	43,757	13,556	57,313	26,329,522
		606,556	3,769,273	19,178,289	-	7,079,999	30,634,117	392,314	1,574,868	1,967,182	32,601,299
₩		8,242,908	21,843,784	221,414,600	185,477	7,792,573	259,479,342	16,707,261	47,205,973	63,913,234	323,392,576

Responding to the COVID-19 pandemic, the Bank recalculates the forward-looking information and recognises additional allowance for loan losses and provisions amounting to ₩220,618 million for the year ended December 31, 2022.

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49. **Risk Management, Continued**

December 31, 2021										
	Due from banks (excluding due from BOK)	Securities measured at FVOCI Bonds (excluding government bonds)	Loans	Derivative financial assets	Other assets	Subtotal	Guarantees (including financial guarantees)	Commit- ments	Subtotal	Total
Manufacturing:										
Display	₩ -	-	730,259	-	2,917	733,176	1,641	267,574	269,215	1,002,391
Semiconductor										
/Mobile phone	-	204,679	5,059,874	-	7,958	5,272,511	115,211	365,071	480,282	5,752,793
Automotive	-	231,343	10,721,833	-	15,286	10,968,462	435,597	1,685,997	2,121,594	13,090,056
Refinery/Chemical										
/Energy	-	620,186	13,875,360	-	27,904	14,523,450	150,371	5,520,913	5,671,284	20,194,734
Steel/Metal	-	146,239	9,985,811	-	13,814	10,145,864	617,066	2,343,478	2,960,544	13,106,408
Others	-	1,395,470	32,703,381	-	53,372	34,152,223	9,268,619	11,055,744	20,324,363	54,476,586
	-	2,597,917	73,076,518	-	121,251	75,795,686	10,588,505	21,238,777	31,827,282	107,622,968
Service:										
Air transportation	-	5,844	3,200,683	-	9,284	3,215,811	291,880	21,000	312,880	3,528,691
Sea transportation	-	-	2,083,099	-	21,353	2,104,452	74,721	751,613	826,334	2,930,786
Other										
transportation	-	140,164	6,261,103	-	12,895	6,414,162	9,110	3,576,532	3,585,642	9,999,804
Leisure/Travel										
industry	-	-	59,072	-	66	59,138	-	1,700	1,700	60,838
Food/Accommoda- -tion	-	72,427	1,990,730	-	3,651	2,066,808	36,674	318,921	355,595	2,422,403
Automotive- related	-	-	513,522	-	876	514,398	12,322	84,891	97,213	611,611
Finance/Insurance and others	5,529,904	9,395,925	68,744,507	528,827	179,047	84,378,210	2,588,124	17,408,058	19,996,182	104,374,392
	5,529,904	9,614,360	82,852,716	528,827	227,172	98,752,979	3,012,831	22,162,715	25,175,546	123,928,525
Other:										
Construction	-	236,235	2,640,398	-	3,628	2,880,261	195,956	1,640,764	1,836,720	4,716,981
Others	655,841	2,411,285	12,062,217	-	5,572,707	20,702,050	155,971	1,548,876	1,704,847	22,406,897
	655,841	2,647,520	14,702,615	-	5,576,335	23,582,311	351,927	3,189,640	3,541,567	27,123,878
₩	6,185,745	14,859,797	170,631,849	528,827	5,924,758	198,130,976	13,953,263	46,591,132	60,544,395	258,675,371

Responding to the COVID-19 pandemic, the Bank recalculates the forward-looking information and recognises additional allowance for loan losses and provisions amounting to ₩924,176 million for the year ended December 31, 2021.

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**49. Risk Management, Continued**

Credit exposures of debt securities by credit rating as of December 31, 2022 and 2021 are as follows:

<b>December 31, 2022</b>				
		12-month expected credit loss	Lifetime expected credit losses	
	Carrying amounts		Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 27,133,598	26,789,221	344,377	-
BBB2 ~ CCC	37,359	14,927	22,432	-
Below CC	-	-	-	-
	₩ 27,170,957	26,804,148	366,809	-
<b>December 31, 2021</b>				
		12-month expected credit loss	Lifetime expected credit losses	
	Carrying amounts		Non credit- impaired	Credit- impaired
AAA ~ BBB1	₩ 21,929,738	21,600,109	329,629	-
BBB2 ~ CCC	33,800	33,800	-	-
Below CC	-	-	-	-
	₩ 21,963,538	21,633,909	329,629	-

**(3) Capital management activities**

**(i) Capital adequacy**

The FSS approved the Bank's use of the Foundation Internal Ratings-Based Approach in July 2008. The Bank has been using the same approach when calculating credit risk-weighted assets since the end of June 2008. The equity capital ratio and equity capital according to the standards of the Bank for International Settlements are calculated for such disclosure. The equity capital ratio and equity capital are calculated on a consolidated basis. In conformity with the Banking Act, which is based on the implementation of Basel III on December 1, 2013, the regulatory capital is divided into the following two categories.

*Tier 1 capital*

- Common Equity Tier 1

Regulatory capital that represents the most subordinated claim in liquidation of the Bank, takes the first and proportionately greatest share of any losses as they occur, and which principal is never repaid outside of liquidation meets the criteria for classification as common equity, including capital stock, capital surplus, retained earnings and accumulated other comprehensive income as common equity Tier 1.

- Additional Tier 1 capital

Capital stock and capital surplus related to issuance of capital securities that are subordinated, have non-cumulative and conditional dividends or interests, and have no maturity or step-up conditions.

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**49. Risk Management, Continued**

*Tier 2 capital (Supplementary Tier 2 capital)*

Regulatory capital that fulfills supplementary capital adequacy requirements, and includes subordinated debt with maturities over 5 years and allowance for loan losses in conformity with external regulatory standards and internal standards.

The BIS capital adequacy ratio and capital in accordance to Basel III standards as of December 31, 2022 and 2021 are as follows:

***BIS capital adequacy ratio***

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Equity capital based on BIS (A):		
Tier 1 capital:		
Common Equity Tier 1	₩ 35,125,348	41,131,484
Additional Tier 1 capital	-	-
	<u>35,125,348</u>	<u>41,131,484</u>
Tier 2 capital	3,197,936	3,454,548
	<u>₩ 38,323,284</u>	<u>44,586,032</u>
Risk-weighted assets (B):		
Credit risk-weighted assets	₩ 277,265,026	291,238,386
Market risk-weighted assets	1,329,603	1,692,127
Operational risk-weighted assets	7,458,674	6,750,345
	<u>₩ 286,053,303</u>	<u>299,680,858</u>
BIS capital adequacy ratio (A/B):	13.40%	14.88%
Tier 1 capital ratio:	12.28%	13.73%
Common Equity Tier 1 ratio	12.28%	13.73%
Additional Tier 1 capital ratio	-	-
Tier 2 capital ratio	1.12%	1.15%

***Equity capital based on BIS***

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Tier 1 capital (A):		
Common Equity Tier 1		
Capital stock	₩ 23,151,559	21,886,559
Capital surplus, etc.	748,121	738,802
Retained earnings	7,355,027	14,226,652
Accumulated other comprehensive income	4,185,537	5,289,110
Common stock deductibles	(314,896)	(1,009,639)
	<u>35,125,348</u>	<u>41,131,484</u>
Tier 2 capital (B):		
Allowance for doubtful accounts, etc.	972,578	924,935
Qualified capital securities	2,244,000	2,312,000
Non-qualified capital securities	-	258,060
Additional stock deductibles	(18,642)	(40,447)
	<u>3,197,936</u>	<u>3,454,548</u>
Equity capital (A+B)	<u>₩ 38,323,284</u>	<u>44,586,032</u>

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49. **Risk Management, Continued**

**(4) Market risk**

**(i) Concept**

Market risk is defined as the possibility of potential loss resulting from fluctuations in interest rates, foreign exchange rates and the price of stocks and commodities. Trading position is exposed to risks, such as interest rate, stock price, and foreign exchange rate, etc. Non-trading position is mostly exposed to interest rates. Accordingly, the Bank classifies market risks into those exposed from trading position or those exposed from non-trading position.

**(ii) Market risks of trading positions**

*Management method on market risks arising from trading positions*

In estimating market risk, the Standardized Approach and the internal model are used. The Standardized Approach is used to calculate the required capital from market risk and the internal model is used to manage risks internally. Since July 2007, the Bank has measured one-day VaR through the historical simulation method using the time series data of past 250 days under a 99% confidence level. The calculated VaR is monitored daily.

The Bank sets total limit of market risk based on annual business plan, risk appetite and others and monitors VaR limit of each department on a daily basis.

**Capital Requirements for Market risk**

The Bank's Capital Requirements for Market risk as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Interest rate risk	₩ 62,386	87,830
Equity risk	93	3
Foreign exchange (FX) risk	17,235	21,964
Option risk	11,249	20,262
Total	₩ 90,963	130,059

**(iii) Market risks of non-trading positions**

*Management method on market risks arising from non-trading positions*

The most critical market risk that arises in non-trading position is the interest rate risk. Interest rate risk is defined as the likely loss resulting from the unfavorable fluctuation of interest rate in the Bank's financial condition and is measured by IRRBB (Interest Rate Risk in Banking Book),  $\Delta$ EVE (change in Economic Value of Equity) and  $\Delta$ NII (change in Net Interest Income).

$\Delta$ EVE represents fluctuations in the economic value of equity capital that may occur due to changes in interest rates affecting the present values of assets, liabilities and off-balance sheet items.  $\Delta$ NII represents changes in net interest income that may occur over a certain period of time (e.g. one year) in the future due to changes in interest rates.

The Bank's Risk Management Committee sets and manages interest rate risk limits on a yearly basis and interest rate risk is monthly measured and monitored.

$\Delta$ EVE and  $\Delta$ NII of the Bank's non-trading positions as of December 31, 2022 and 2021 are as follows:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
$\Delta$ EVE	₩ 1,484,769	792,049
$\Delta$ NII	389,249	135,018

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49. Risk Management, Continued

(iv) Foreign currency risk

Outstanding balances by currency with significant exposure as of December 31, 2022 and 2021 are as follows:

		December 31, 2022						
		KRW	USD	EUR	JPY	GBP	Others	Total
Financial assets:								
Cash and due from banks	₩	3,980,664	7,358,901	24,870	52,023	14,083	108,265	11,538,806
Securities measured at FVTPL		11,206,799	691,367	-	2,218	-	51,522	11,951,906
Securities measured at FVOCI		28,590,211	8,016,390	25	376,526	-	701,767	37,684,919
Securities measured at amortized cost		6,355,884	-	-	-	-	-	6,355,884
Loans measured at FVTPL		541,811	-	-	-	-	-	541,811
Loans measured at amortized cost		138,177,034	51,883,126	3,573,847	1,682,518	1,051,281	1,677,797	198,045,603
Derivative financial assets		6,804,262	2,674,562	64,348	22,321	175,820	53,142	9,794,455
Other financial assets		5,194,841	2,330,511	45,396	51,070	16,868	37,926	7,676,612
		200,851,506	72,954,857	3,708,486	2,186,676	1,258,052	2,630,419	283,589,996
Financial liabilities:								
Financial liabilities measured at FVTPL		1,289,717	180,007	-	-	-	-	1,469,724
Deposits		55,270,353	12,572,982	34,059	448,083	78	1,101	68,326,656
Borrowings		4,609,133	18,257,698	62,662	1,101,058	-	1,398,693	25,429,244
Debentures		120,509,021	27,774,042	2,752,363	181,000	97,197	7,398,273	158,711,896
Derivative financial liabilities		7,858,410	3,056,382	114,369	8,662	218,257	60,922	11,317,002
Other financial liabilities		4,197,192	2,264,017	34,930	31,419	16,893	173,280	6,717,731
		193,733,826	64,105,128	2,998,383	1,770,222	332,425	9,032,269	271,972,253
Net financial position	₩	7,117,680	8,849,729	710,103	416,454	925,627	(6,401,850)	11,617,743

		December 31, 2021						
		KRW	USD	EUR	JPY	GBP	Others	Total
Financial assets:								
Cash and due from banks	₩	6,046,893	5,652,467	30,847	52,579	17,370	175,611	11,975,767
Securities measured at FVTPL		9,030,109	693,919	-	1,101	-	93,682	9,818,811
Securities measured at FVOCI		30,609,818	6,639,366	25	311,838	-	314,089	37,875,136
Securities measured at amortized cost		2,968,877	-	-	-	-	-	2,968,877
Loans measured at FVTPL		644,412	-	-	-	-	-	644,412
Loans measured at amortized cost		123,311,272	40,714,606	3,103,077	1,457,553	789,280	1,387,606	170,763,394
Derivative financial assets		4,092,050	1,117,750	44,940	2,464	30,077	18,291	5,305,572
Other financial assets		3,589,931	1,880,512	290,095	25,864	8,011	41,635	5,836,048
		180,293,362	56,698,620	3,468,984	1,851,399	844,738	2,030,914	245,188,017
Financial liabilities:								
Financial liabilities measured at FVTPL		1,811,241	255,903	-	-	-	-	2,067,144
Deposits		41,469,942	10,949,203	44,634	327,145	91	1,106	52,792,121
Borrowings		5,637,556	14,709,344	20,683	1,037,799	-	658,395	22,063,777
Debentures		109,615,309	26,463,222	1,704,147	259,501	791,815	6,531,336	145,365,330
Derivative financial liabilities		3,988,813	728,275	4,569	4,296	16,166	15,722	4,757,841
Other financial liabilities		4,458,827	2,214,186	13,293	18,398	1,119	111,807	6,817,630
		166,981,688	55,320,133	1,787,326	1,647,139	809,191	7,318,366	233,863,843
Net financial position	₩	13,311,674	1,378,487	1,681,658	204,260	35,547	(5,287,452)	11,324,174

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49. **Risk Management, Continued**

(v) *Interest rate risk management*

The Bank is closely monitoring the outputs prepared by the industrial working groups which is managing the transition to alternative benchmark rates and the markets related the rates. The outputs include the information published by regulatory authorities related to IBORs. The authorities have made it clear that after the end of 2021, they will no longer persuade or force banks to submit IBORs. Responding the transition, the Bank organized a task force led by the head of the risk management division and the task force has established the LIBOR transition plan that consists of workflows such as alternative interest rate determination, application development, customer communication management, risk management, taxation, finance, legal, and accounting system establishment. The important progress of the plan is reported to the management and may also be reported to the board of directors if necessary. The purpose of the task force is to review where exposure to IBOR occurs within the Bank's business, and to develop and implement the plan to transit to the alternative benchmark rates. As of December 31, 2021, the Bank has completed the transition and the application of the alternative benchmark rates and plans to complete the transition to the alternative benchmark rates before June 2023 for existing contracts contracted in USD with a contract maturity after June 2023.

The financial instruments that have yet to transition to alternative benchmark rates as of December 31, 2022 are as follows. The amounts of the non-derivative financial instruments are the carrying amounts and the amounts of the derivatives, the commitments and the guarantees are the nominal amounts.

		USD
Non-derivative financial assets:		
Financial assets measured at FVOCI	₩	6,342
Financial assets measured at amortized cost		10,932,787
Privately placed corporate bonds		19,010
		10,958,139
Non-derivative financial liabilities:		
Financial liabilities measured at amortized cost		781,924
Derivative:		
Trading purpose:		
Interest rate		76,158,628
Currency		42,669,517
Hedging purpose:		
Interest rate		16,209,017
Currency		5,025,604
		140,062,766
Commitments and guarantees	₩	75,022

**49. Risk Management, Continued**

**(5) Liquidity risk management**

**(i) Concept**

Liquidity risk is defined as the possibility of potential loss due to a temporary shortage in funds caused by a maturity mismatch or an unexpected capital outlay. Liquidity risk soars when funding rates rise, assets are sold below a normal price, or a good investment opportunity is missed.

**(ii) Approach to liquidity risk management**

The Bank manages its liquidity risks as follows:

*Allowable limit for liquidity risk*

- The allowable limit for liquidity risk sets LCR, NSFR and Mid- to long-term foreign currency fund management ratio
- The management standards with regards to the allowable limit for liquidity risk should be set using separate and stringent set ratios in accordance with the FSS guidelines.

*<Measurement Methodology>*

- LCR: (High quality liquid assets / Total net cash outflows over the next 30 calendar days) X 100
- NSFR: Available Stable Funding / Required Stable Funding X 100
- Mid- to long-term foreign currency fund management ratio: Foreign currency funding being repaid after 1 year / Foreign currency lending being collected after 1 year X 100

*Early warning indicator*

To identify prematurely and cope with worsening liquidity risk trends, the Bank has set up 15 indexes such as the “Foreign Exchange Stabilization Bond CDS Premium,” and measures the trend monthly as a means for establishing the allowable liquidity risk limit complementary measures.

*Stress-Test analysis and contingency plan*

- The Bank evaluates the effects on the liquidity risk and identifies the inherent flaws. In the case where an unpredictable and significant liquidity crisis occurs, the Bank executes risk situation analysis quarterly based on crisis specific to the Bank, market risk and complex emergency, and reports to the Risk Management Committee for the Bank’s solvency securitization.
- The Bank established detailed contingency plan to manage the liquidity risks at every risk situations.

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49. Risk Management, Continued

(iii) Analysis on remaining contractual maturity of financial instruments

Remaining contractual maturity analysis of non-derivative financial instruments including interest payment as of December 31, 2022 and 2021 are as follows:

		December 31, 2022					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	9,025,666	430,095	1,031,942	930,574	-	11,418,277
Securities measured at FVTPL		117,102	99,673	184,468	412,498	11,157,484	11,971,225
Securities measured at FVOCI		188,333	1,164,031	4,422,058	12,510,195	15,487,979	33,772,596
Securities measured at amortized cost		249,997	500,011	1,777,966	3,828,118	-	6,356,092
Loans		15,068,406	21,683,856	68,144,918	77,451,592	15,820,283	198,169,055
Other financial assets		6,344,790	-	-	-	1,447,354	7,792,144
	₩	<u>30,994,294</u>	<u>23,877,666</u>	<u>75,561,352</u>	<u>95,132,977</u>	<u>43,913,100</u>	<u>269,479,389</u>
Financial liabilities:							
Financial liabilities measured at FVTPL	₩	60,946	123,271	388,312	290,403	88,371	951,303
Deposits		30,564,386	12,664,843	20,632,157	4,364,976	126,939	68,353,301
Borrowings		3,632,166	5,829,318	11,367,549	3,528,097	967,068	25,324,198
Debentures		4,841,503	11,647,424	54,655,589	83,734,150	4,151,709	159,030,375
Other financial liabilities		3,837,948	2,057,141	-	-	946,270	6,841,359
	₩	<u>42,936,949</u>	<u>32,321,997</u>	<u>87,043,607</u>	<u>91,917,626</u>	<u>6,280,357</u>	<u>260,500,536</u>
		December 31, 2021					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	9,612,371	515,608	550,680	1,029,287	-	11,707,946
Securities measured at FVTPL		46,621	25,023	1,050,540	1,149,972	7,506,684	9,778,840
Securities measured at FVOCI		361,611	1,207,439	4,133,965	10,816,960	15,093,228	31,613,203
Securities measured at amortized cost		10,000	340,486	1,113,529	1,505,020	-	2,969,035
Loans		10,042,137	14,241,774	61,880,066	67,500,212	15,813,164	169,477,353
Other financial assets		5,097,270	-	-	-	803,773	5,901,043
	₩	<u>25,170,010</u>	<u>16,330,330</u>	<u>68,728,780</u>	<u>82,001,451</u>	<u>39,216,849</u>	<u>231,447,420</u>
Financial liabilities:							
Financial liabilities measured at FVTPL	₩	8,854	125,618	682,882	348,104	214,802	1,380,260
Deposits		25,608,016	8,124,580	16,519,769	2,418,409	118,943	52,789,717
Borrowings		3,140,265	4,398,427	10,504,484	2,932,717	1,025,321	22,001,214
Debentures		4,648,419	11,697,892	47,013,584	76,093,647	6,148,738	145,602,280
Other financial liabilities		5,008,883	1,572,656	-	-	359,118	6,940,657
	₩	<u>38,414,437</u>	<u>25,919,173</u>	<u>74,720,719</u>	<u>81,792,877</u>	<u>7,866,922</u>	<u>228,714,128</u>

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49. **Risk Management, Continued**

Remaining contractual maturity analysis of derivative financial instruments as of December 31, 2022 and 2021 are as follows:

*Net settlement of derivative financial instruments*

		<b>December 31, 2022</b>					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency	₩	14,310	56,466	123,397	(231,289)	329,021	291,905
Interest rate		1	-	-	-	-	1
Hedging purpose derivatives:							
Interest rate		(43,682)	(20,611)	265,185	907,552	912,990	2,021,434
	₩	<u>(29,371)</u>	<u>35,855</u>	<u>388,582</u>	<u>676,263</u>	<u>1,242,011</u>	<u>2,313,340</u>
		<b>December 31, 2021</b>					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency	₩	201	-	-	-	-	201
Interest rate		(11,805)	(23,802)	8,326	(158,553)	535,474	349,640
Hedging purpose derivatives:							
Interest rate		33,896	115,454	180,557	631,338	687,222	1,648,467
	₩	<u>22,292</u>	<u>91,652</u>	<u>188,883</u>	<u>472,785</u>	<u>1,222,696</u>	<u>1,998,308</u>

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49. Risk Management, Continued

*Gross settlement of derivative financial instruments*

		December 31, 2022					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	52,226,487	31,340,410	63,562,432	77,160,037	7,031,148	231,320,514
Outflow		52,120,608	31,419,674	63,702,102	76,526,053	6,968,341	230,736,778
Hedging purpose derivatives:							
Currency							
Inflow		382,466	331,653	8,692,048	15,738,325	3,653,029	28,797,521
Outflow		727,331	518,563	8,825,328	16,632,521	3,577,128	30,280,871
Total inflow	₩	52,608,953	31,672,063	72,254,480	92,898,362	10,684,177	260,118,035
Total outflow	₩	52,847,939	31,938,237	72,527,430	93,158,574	10,545,469	261,017,649
		December 31, 2021					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	56,066,208	34,469,849	99,529,773	89,932,702	8,452,901	288,451,433
Outflow		56,009,986	34,338,644	99,195,857	90,326,262	8,476,594	288,347,343
Hedging purpose derivatives:							
Currency							
Inflow		16,920	76,028	4,791,344	14,245,183	4,727,452	23,856,927
Outflow		16,786	79,183	6,083,666	14,902,210	4,624,965	25,706,810
Total inflow	₩	56,083,128	34,545,877	104,321,117	104,177,885	13,180,353	312,308,360
Total outflow	₩	56,026,772	34,417,827	105,279,523	105,228,472	13,101,559	314,054,153

Remaining contractual maturity analysis of guarantees and commitments as of December 31, 2022 and 2021 are as follows:

		December 31, 2022					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	1,004,990	1,588,345	3,883,351	9,810,539	420,035	16,707,260
Commitments		100,641	51,336	761,191	1,500,964	46,812,437	49,226,569
	₩	1,105,631	1,639,681	4,644,542	11,311,503	47,232,472	65,933,829
		December 31, 2021					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	1,431,023	1,358,214	3,660,638	6,720,569	782,819	13,953,263
Commitments		227,768	21,982	715,958	2,765,040	44,880,979	48,611,727
	₩	1,658,791	1,380,196	4,376,596	9,485,609	45,663,798	62,564,990

## **Independent Auditors' Review Report on Internal Control over Financial Reporting**

Based on a report originally issued in Korean

The Chief Executive Officer  
Korea Development Bank

We have reviewed the accompanying report on the operations of the Internal Control over Financial Reporting ("ICFR") of Korea Development Bank (the "Bank") as of December 31, 2022. The Bank's management is responsible for designing and operating ICFR and for its assessment of the effectiveness of ICFR. Our responsibility is to review management's assessment of ICFR and issue a report based on our review. In the accompanying report of management's assessment of ICFR, the Bank's management stated: "Based on the assessment of the operations of the ICFR, no material weakness existed and the Bank's ICFR has been effectively designed and operated as of December 31, 2022 in accordance with the ICFR standards"

We conducted our review in accordance with ICFR Review Standards, issued by the Korean Institute of Certified Public Accountants. Those standards require that we plan and perform, in all material respects, the review of management's report on the operations of the ICFR to obtain a lower level of assurance than an audit. Our review consists principally of obtaining an understanding of the Bank's ICFR, inquiries of Bank personnel about the details of the report, and tracing to related documents we considered necessary in the circumstances.

The Bank's ICFR is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with K-IFRS. Because of its inherent limitations, however, ICFR may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on our review, nothing has come to our attention that causes us to believe that report on the operations of ICFR as of December 31, 2022 is not prepared in all material respects, in accordance with ICFR standards issued by the Internal Accounting Control System Operation Committee.

This report applies to the Bank's ICFR in existence as of December 31, 2022. We did not review the Bank's ICFR subsequent to December 31, 2022.



Seoul, Korea  
March 28, 2023



## ICFR Operating Status Report by CEO and ICFR Officer

To the Shareholders, Board of Directors and Auditor

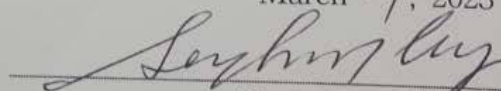
As the CEO and the ICFR Officer of KDB, assessed operating status of KDB's ICFR for the year ending December 31, 2022.

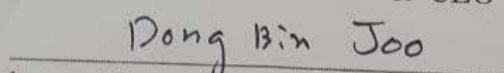
Design and operation of ICFR is the responsibility of KDB's management including CEO and ICFR Officer. We evaluated whether the company effectively designed and operated its ICFR to prevent and detect errors or frauds which may cause a misstatement in financial statements to ensure preparation and disclosure of reliable financial information. We used the 'Conceptual Framework for Designing and Operating Internal Control over Financial Reporting in Korea as the criteria for design and operation of the company's ICFR. And we concluded that an evaluation of ICFR based on the 'Management Guideline for Evaluating and Reporting Effectiveness of Internal Control over Financial Reporting' established by the ICFR Committee.

Based on our assessment, we concluded that the company's ICFR is designed and operated effectively as of December 31, 2022 in accordance with the 'Conceptual Framework for Designing and Operating Internal Control over Financial Reporting'.

We certify that this report does not contain any false statements nor omit to state a fact necessary to be presented herein. We also certify that this report does not contain or present any statements which might cause material misunderstandings of the readers and we have reviewed and verified this report with sufficient care.

March 27, 2023

  
Chairman & CEO

  
Internal Control over Financial Reporting Officer



## KDB Bank

*(a statutory juridical entity established under The Korea Development Bank Act of 1953,  
as amended, in the Republic of Korea)*

**U.S.\$30,000,000,000**

### **Global Medium Term Note Programme for the issue of Notes with a minimum maturity of one month**

*Under this U.S.\$30,000,000,000 Global Medium Term Note Programme (the “Programme”), The Korea Development Bank (the “Issuer” or the “Bank”) acting through its principal office in Korea, its Hong Kong Branch, its London Branch, its New York Branch, its Tokyo Branch, its Singapore Branch or any other overseas branch, as the case may be, may from time to time issue Medium Term Notes (the “Notes”) denominated in such currencies as may be agreed with the Purchaser(s) (as defined below). This Information Memorandum supersedes any previous Information Memorandum and supplements thereto. Any Notes to be issued after the date hereof under the Programme are issued subject to the provisions set out herein. This does not affect any Notes issued prior to the date hereof.*

The Notes will have a minimum maturity of one month from the date of issue (except as set out herein) and, subject as set out herein, the maximum aggregate nominal amount of all Notes from time to time outstanding will not exceed U.S.\$30,000,000,000 (or its equivalent in other currencies at the time of agreement to issue, subject as further set out herein). Notes may be issued in bearer or registered form (respectively “Bearer Notes” and “Registered Notes”).

The Notes may be issued on a continuing basis to one or more of the Dealers specified on page 13 (each a “Dealer” and together the “Dealers”, which expression shall include any additional Dealer appointed under the Programme from time to time). Notes may also be issued to persons other than Dealers. Dealers and such other persons are referred to as “Purchasers”.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the “SGX-ST”) for permission to deal in, and quotation of any Notes that may be issued pursuant to the Programme and which are agreed at the time of issue thereof to be so listed on the SGX-ST. Such permission will be granted when such Notes have been admitted to the Official List of the SGX-ST (“Official List”). The SGX-ST assumes no responsibility for the correctness of any of the statements made or opinions expressed or reports contained herein. Admission to the Official List and quotation of any Notes on the SGX-ST are not to be taken as an indication of the merits of the Issuer, its subsidiaries, its associated companies, the Programme or such Notes. Notice of the aggregate nominal amount of Notes, interest (if any) payable in respect of Notes, the issue price of Notes and any other terms and conditions not contained herein which are applicable to each Tranche (as defined under “Terms and Conditions of the Notes”) of Notes will be set out in a pricing supplement (the “Pricing Supplement”) which, with respect to Notes to be listed on the SGX-ST, will be delivered to the SGX-ST before the date of listing of the Notes of such Tranche. The Issuer may also issue Notes listed on any alternative or additional stock exchange and may also issue unlisted Notes.

#### **Arranger**

**Crédit Agricole CIB**

#### **Dealers**

**ANZ**  
**BNP PARIBAS**  
**Citigroup**  
**Crédit Agricole CIB**  
**Daiwa Capital Markets Singapore Limited**  
**HSBC**  
**J.P. Morgan**  
**Mirae Asset Securities Co., Ltd.**  
**Morgan Stanley**  
**National Australia Bank Limited**  
**Nomura**  
**Standard Chartered Bank**  
**UBS**

**Barclays**  
**BofA Securities**  
**Commonwealth Bank of Australia**  
**Credit Suisse**  
**Goldman Sachs International**  
**ING**  
**KDB Asia Limited**  
**Mizuho Securities**  
**MUFG**  
**Natixis**  
**Société Générale Corporate & Investment Banking**  
**TD Securities**  
**Wells Fargo Securities**

The Issuer accepts responsibility for the information contained in this Information Memorandum. To the best of the Issuer's knowledge and belief (having taken all reasonable care to ensure that such is the case) the information contained in this Information Memorandum is in accordance with the facts and does not omit anything likely to affect the import of such information.

This Information Memorandum is to be read in conjunction with all the documents which are deemed to be incorporated herein by reference (see "Documents Incorporated By Reference" on page 11). This Information Memorandum shall be read and construed on the basis that such documents are so incorporated and form part of this Information Memorandum.

The Dealers have not separately verified the information contained herein. Accordingly, no representation, warranty or undertaking, express or implied, is made and no responsibility is accepted by the Dealers (including any affiliate of any Dealer or any director, officer, employee or agent of any of them) as to the accuracy or completeness of the financial information contained in this Information Memorandum, or any other financial statements or any further information supplied by the Dealers or on their behalf, in each case, in connection with the Programme or the Notes. The Dealers (including any affiliate of any Dealer or any director, officer, employee or agent of any of them) accept no liability in relation to the financial or other information contained or incorporated by reference in this Information Memorandum or any other statements made or purported to be made by the Dealers or on their behalf or any further information supplied by the Dealers or on their behalf, in each case, in connection with the Issuer, the Programme or the Notes or their distribution. The Dealers (including any affiliate of any Dealer or any director, officer, employee or agent of any of them) accordingly disclaim all and any liability whether arising in tort or contract or otherwise which they might otherwise have in respect of this Information Memorandum or any such statement or information. The statements made in this paragraph are without prejudice to the responsibility of the Issuer under the Programme.

No person is or has been authorised to give any information or to make any representation not contained in or not consistent with this Information Memorandum or any other financial statements or further information supplied in connection with the Programme or the Notes and, if given or made, such information or representation must not be relied upon as having been authorised by either the Issuer or any of the Dealers.

This Information Memorandum, any other financial statements and any further information supplied in connection with the Programme or the Notes are not intended to provide the basis of any credit or other evaluation and should not be considered as a recommendation by either the Issuer or any of the Dealers that any recipient of this Information Memorandum or any other financial statements or any further information supplied in connection with the Programme or the Notes should purchase any of the Notes. Each investor contemplating purchasing Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. None of this Information Memorandum, any other financial statements and any further information supplied in connection with the Programme or the Notes constitutes an offer or invitation by or on behalf of the Issuer or the Dealers or any of them to any person to subscribe for or to purchase any of the Notes.

Neither the delivery of this Information Memorandum nor the offering, sale or delivery of any Notes shall in any circumstances imply that the information contained herein concerning the Issuer is correct at any time subsequent to the date hereof or that any other financial statements or any further information supplied in connection with the Programme or the Notes is correct as of any time subsequent to the date indicated in the document containing the same. The Dealers (including any affiliate of any Dealer or any director, officer, employee or agent of any of them) expressly do not undertake to review the financial condition or affairs of the Issuer or any of its subsidiaries during the life of the Programme or to advise any investor in the Notes of any information coming to their attention. Investors should review, inter alia, the most recently published documents incorporated by reference into this Information Memorandum when deciding whether or not to purchase any of the Notes.

This Information Memorandum does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this Information Memorandum and the offer or sale of Notes may be restricted by law in certain jurisdictions. The Issuer and the Dealers do not represent that this document may be lawfully distributed, or that the Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. Accordingly, the Notes may not be offered or sold, directly or indirectly, and neither this Information Memorandum nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations and the Dealers have represented that all offers and sales by them will be made on the same terms.

The distribution of this Information Memorandum and the offer or sale of Notes may be restricted by law in certain jurisdictions. Persons into whose possession this Information Memorandum or any Notes come must inform themselves about, and observe, any such restrictions. In particular, there are restrictions on the distribution of this Information Memorandum and the offer or sale of the Notes in the United States, the European Economic Area (the “EEA”), the United Kingdom (the “UK”), Hong Kong, the Netherlands, Singapore, the Republic of Korea (“Korea” or the “Republic”), Japan and the People’s Republic of China (the “PRC”) (see “Subscription and Sale and Transfer and Selling Restrictions” on page 203).

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended, (the “Securities Act”) or any U.S. State securities laws and may not be offered or sold in the United States or to, or for the account or the benefit of, U.S. persons unless an exemption from the registration requirements of the Securities Act is available and in accordance with all applicable securities laws of any state of the United States and any other jurisdiction. See “Form of the Notes” for a description of the manner in which Notes will be issued. Registered Notes are subject to certain restrictions on transfer (see “Subscription and Sale and Transfer and Selling Restrictions” on page 203).

*Singapore SFA Product Classification:* In connection with Section 309B of the Securities and Futures Act 2001 of Singapore (the “SFA”) and the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the “CMP Regulations 2018”), unless otherwise specified before an offer of Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are ‘prescribed capital markets products’ (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

In making an investment decision, investors must rely on their own examination of the Issuer and the terms of the Notes being offered, including the merits and risks involved. The Notes have not been approved or disapproved by the United States Securities and Exchange Commission or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this Information Memorandum or confirmed the accuracy or determined the adequacy of the information contained in this Information Memorandum. Any representation to the contrary is unlawful.

None of the Dealers or the Issuer makes any representation to any investor in the Notes regarding the legality of its investment under any applicable laws. Any investor in the Notes should be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

In connection with the issue of any Tranche of Notes, the Dealer or Dealers (if any) named as the stabilising manager(s) (the “Stabilising Manager(s)”) (or persons acting on behalf of any Stabilising Manager(s)) in the applicable Pricing Supplement may over-allot Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, there is no assurance that

the Stabilising Manager(s) (or persons acting on behalf of a Stabilising Manager) will undertake stabilisation action. Any stabilisation action may begin on or after the date on which adequate public disclosure of the terms of the offer of the relevant Tranche of Notes is made and, if begun, may be ended at any time, but it must end no later than the earlier of 30 days after the issue date of the relevant Tranche of Notes and 60 days after the date of the allotment of the relevant Tranche of Notes. Any stabilisation action or overallotment must be conducted by the relevant Stabilising Manager(s) (or person(s) acting on behalf of any Stabilising Manager(s)) in accordance with all applicable laws and rules.

## **U.S. INFORMATION**

This Information Memorandum is being submitted on a confidential basis in the United States to a limited number of QIBs and Institutional Accredited Investors (each as defined under “Form of the Notes”) for informational use solely in connection with the consideration of the purchase of certain Notes issued under the Programme. Its use for any other purpose in the United States is not authorised. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to U.S. persons, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986 (the “Code”) and the regulations promulgated thereunder.

Registered Notes may be offered or sold within the United States only to QIBs or to Institutional Accredited Investors, in either case in transactions exempt from registration under the Securities Act in reliance on Rule 144A under the Securities Act (“Rule 144A”) or any other applicable exemption. Each U.S. purchaser of Registered Notes is hereby notified that the offer and sale of any Registered Notes to it may be being made in reliance upon the exemption from the registration requirements of Section 5 of the Securities Act provided by Rule 144A.

Purchasers of Definitive IAI Registered Notes will be required to execute and deliver an IAI Investment Letter (as defined under “Terms and Conditions of the Notes”). Each purchaser or holder of Definitive IAI Registered Notes, Notes represented by a Rule 144A Global Note or any Notes issued in registered form in exchange or substitution therefor (together, “Legended Notes”) will be deemed, by its acceptance or purchase of any such Legended Notes, to have made certain representations and agreements intended to restrict the resale or other transfer of such Notes as set out in “Subscription and Sale and Transfer and Selling Restrictions”. Unless otherwise stated, terms used in this paragraph have the meanings given to them in “Form of the Notes”.

## **MIFID II PRODUCT GOVERNANCE/TARGET MARKET**

The Pricing Supplement in respect of any Notes may include a legend entitled “MiFID II Product Governance” which will outline the target market assessment in respect of the Notes and which channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a “distributor”) should take into consideration the target market assessment; however, a distributor subject to Directive 2014/65/EU (as amended, “MiFID II”) is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the target market assessment) and determining appropriate distribution channels.

A determination will be made in relation to each issue about whether, for the purpose of the MiFID Product Governance rules under EU Delegated Directive 2017/593 (the “MiFID Product Governance Rules”), any Dealer subscribing for any Notes is a manufacturer in respect of such Notes, but otherwise neither the Arranger

nor the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the MiFID Product Governance Rules.

### **UK MiFIR PRODUCT GOVERNANCE/TARGET MARKET**

The Pricing Supplement in respect of any Notes may include a legend entitled “UK MiFIR Product Governance” which will outline the target market assessment in respect of the Notes and which channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a “distributor”) should take into consideration the target market assessment; however, a distributor subject to the FCA Handbook Product Intervention and Product Governance Sourcebook (the “UK MiFIR Product Governance Rules”) is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the target market assessment) and determining appropriate distribution channels.

A determination will be made in relation to each issue about whether, for the purpose of the UK MiFIR Product Governance Rules, any Dealer subscribing for any Notes is a manufacturer in respect of such Notes, but otherwise neither the Arranger nor the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the UK MiFIR Product Governance Rules.

### **PROHIBITION OF SALES TO EEA RETAIL INVESTORS**

If the Pricing Supplement in respect of any Notes includes a legend entitled “Prohibition of Sales to EEA Retail Investors”, the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the “Insurance Distribution Directive”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the “Prospectus Regulation”). Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

### **PROHIBITION OF SALES TO UK RETAIL INVESTORS**

If the Pricing Supplement in respect of any Notes includes a legend entitled “Prohibition of Sales to UK Retail Investors”, the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the UK. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (the “EUWA”); (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the “FSMA”) and any rules or regulations made under the FSMA to implement the Insurance Distribution Directive, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of the Prospectus Regulation as it forms part of domestic law by virtue of the EUWA (the “UK Prospectus Regulation”). Consequently, no key information document required by the PRIIPs Regulation as it forms part of domestic law by virtue of the EUWA (the “UK PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

## **AVAILABLE INFORMATION**

To permit compliance with Rule 144A in connection with any resales or other transfers of Notes that are “restricted securities” within the meaning of the Securities Act, the Issuer has undertaken in a deed poll dated 15 June 2012 (the “Deed Poll”) to furnish, upon the request of a holder of such Notes or any beneficial interest therein, to such holder or to a prospective purchaser designated by him, the information required to be delivered under Rule 144A(d)(4) under the Securities Act if, at the time of the request, any of the Notes remains outstanding as “restricted securities” within the meaning of Rule 144(a)(3) of the Securities Act and the Issuer is neither a reporting company under Section 13 or 15(d) of the U.S. Securities Exchange Act of 1934, as amended, (the “Exchange Act”) nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder.

## **SERVICE OF PROCESS AND ENFORCEMENT OF CIVIL LIABILITIES**

The Issuer is a corporation organised under the laws of Korea. All of the officers and directors named herein reside outside the United States and all or a substantial portion of the assets of the Issuer and of such officers and directors are located outside the United States. As a result, it may not be possible for investors to effect service of process outside Korea upon the Issuer or such persons, or to enforce judgements against them obtained in courts outside Korea predicated upon civil liabilities of the Issuer or such directors and officers under laws other than Korean law, including any judgement predicated upon United States federal securities laws. The Issuer has been advised by Kim & Chang, its counsel, that there is doubt as to the enforceability in Korea in original actions or in actions for enforcement of judgements of United States courts of civil liabilities predicated solely upon the federal securities laws of the United States.

## **CERTAIN DEFINED TERMS AND CONVENTIONS**

In this Information Memorandum, references to “KRW”, “Won” and “₩” are to the currency of Korea, references to “CNY”, “Renminbi” and “RMB” are to the lawful currency of the People’s Republic of China (the “PRC”), references to “USD”, “\$”, “U.S.\$” and “U.S. dollars” are to United States dollars, references to “GBP”, “£” and “sterling” are to pounds sterling, references to “Yen” and “¥” are to Japanese Yen and references to “EUR”, “euro” and “€” refer to the currency introduced at the start of the third stage of European economic and monetary union pursuant to the Treaty on the Functioning of the European Union, as amended. All references to the “Government” are to the national government of Korea. In addition, references to “PRC” or “China” are to the PRC and for geographical reference only (unless otherwise stated) exclude Taiwan, Hong Kong and Macau.

Any discrepancies in any table between totals and sums of the amounts listed are due to rounding. The Issuer maintains its accounts in Won. For convenience, Won amounts in this Information Memorandum as at 31 December 2021 have been translated into U.S. dollars at the rate of ₩1,185.50 = U.S.\$1.00, the exchange rate based on the basic rate under the market average exchange rate system, provided by Seoul Money Brokerage Services, Ltd. between Won and U.S. dollars. However, such translations should not be construed as representations that the Won amounts have been, could have been or could in the future be converted into U.S. dollars at these or any other rates.

The Agency Agreement, the Deed of Covenant, the Deed Poll, the Notes, the Receipts and the Coupons (each as defined under “Terms and Conditions of the Notes”) and any non-contractual obligations arising out of or in connection therewith will be governed by, and construed in accordance with, English law.

## **CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS**

Some statements in this Information Memorandum may be deemed to be forward-looking statements. Forward-looking statements include statements concerning the Issuer's plans, objectives, goals, strategies, future operations and performance and the assumptions underlying these forward-looking statements. When used in this Information Memorandum, the words "anticipates", "estimates", "expects", "believes", "intends", "plans", "aims", "seeks", "may", "will", "should" and any similar expressions generally identify forward-looking statements. These forward-looking statements are contained in the section entitled "The Korea Development Bank" and other sections of this Information Memorandum. The Issuer has based these forward-looking statements on the current view of its management with respect to future events and financial performance. Although the Issuer believes that the expectations, estimates and projections reflected in its forward-looking statements are reasonable as of the date of this Information Memorandum, if one or more of the risks or uncertainties materialise, including those identified below or which the Issuer has otherwise identified in this Information Memorandum, or if any of the Issuer's underlying assumptions prove to be incomplete or inaccurate, the Issuer's actual results of operations may vary from those expected, estimated or predicted.

The risks and uncertainties referred to above include:

- the Issuer's ability to implement its strategy successfully;
- the Issuer's growth and expansion;
- future levels of non-performing loans;
- the adequacy of allowance for credit and investment losses;
- technological changes;
- interest rates;
- availability of funding and liquidity;
- the Issuer's exposure to market risks; and
- adverse market and regulatory conditions.

Any forward-looking statements contained in this Information Memorandum speak only as at the date of this Information Memorandum. Without prejudice to any requirements under applicable laws and regulations, the Issuer expressly disclaims any obligation or undertaking to disseminate after the date of this Information Memorandum any updates or revisions to any forward-looking statements contained herein to reflect any change in expectations thereof or any change in events, conditions or circumstances on which any such forward-looking statement is based.

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## **DOCUMENTS INCORPORATED BY REFERENCE**

The following documents published or issued from time to time after the date hereof shall be deemed to be incorporated in, and to form part of, this Information Memorandum:

- (1) the most recently published financial statements of the Issuer from time to time;
- (2) all supplements to this Information Memorandum circulated by the Issuer from time to time in accordance with the undertaking described below given by it in the Programme Agreement (as defined in “Subscription and Sale and Transfer and Selling Restrictions” on page 203); and
- (3) the most recent annual report (including the shelf registration statement or post-effective amendment, as the case may be) filed with the United States Securities and Exchange Commission and other reports (including prospectus supplements) filed with the United States Securities and Exchange Commission since the most recent annual report (including the shelf registration statement or post-effective amendment, as the case may be),

save that any statement contained herein or in a document all or the relative portion of which is incorporated by reference herein shall be deemed to be modified or superseded for the purpose of this Information Memorandum to the extent that a statement contained in any such subsequent document all or the relative portion of which is or is deemed to be incorporated by reference herein modifies or supersedes such earlier statement (whether expressly, by implication or otherwise). Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Information Memorandum.

Any unaudited financial statements incorporated by reference herein should not be relied upon to provide the same quality of information associated with information that has been subject to an audit nor taken as an indication of the expected financial condition and results of operations of the Issuer for the relevant full financial year. Potential investors must exercise caution when using such data to evaluate the Issuer’s financial condition and results of operations.

The Issuer will provide, without charge, to each person to whom a copy of this Information Memorandum has been delivered, upon the written request of any such person, a copy of any or all of the documents which, or portions of which, are incorporated herein by reference. Written requests for such documents should be directed to the Issuer at its registered office set out at the end of this Information Memorandum. In addition, such documents will be available from the principal office in London of Deutsche Bank AG, London Branch (the “Fiscal Agent”) for Notes listed on the SGX-ST.

The Issuer will, in connection with the listing of the Notes on the SGX-ST, so long as any Note remains outstanding and listed on such exchange, in the event of any material change in the condition of the Issuer which is not reflected in this Information Memorandum, prepare a supplement to this Information Memorandum or publish a new Information Memorandum for use in connection with any subsequent issue of the Notes to be listed on the SGX-ST.

If the terms of the Programme are modified or amended in a manner which would make this Information Memorandum, as so modified or amended, inaccurate or misleading, a new information memorandum will be prepared.

## DESCRIPTION OF THE PROGRAMME

Under the Programme, the Issuer acting through its principal office in Korea, its Hong Kong Branch, its London Branch, its New York Branch, its Tokyo Branch, its Singapore Branch or any other overseas branch, as the case may be, may from time to time issue Notes denominated in any currency, subject as set out herein. A summary of the terms and conditions of the Programme and the Notes appears below. The applicable terms of any Notes will be agreed between the Issuer and the relevant Purchaser(s) prior to the issue of the Notes and will be set out in the Terms and Conditions of the Notes endorsed on, attached to, or incorporated by reference into, the Notes, as modified and supplemented by the applicable Pricing Supplement attached to, or endorsed on, such Notes, as more fully described under “Form of the Notes”.

This Information Memorandum and any supplement will only be valid for listing Notes on the SGX-ST in an aggregate nominal amount which, when added to the aggregate nominal amount then outstanding of all Notes previously or simultaneously issued under the Programme, does not exceed U.S.\$30,000,000,000 or its equivalent in other currencies. For the purpose of calculating the U.S. dollar equivalent of the aggregate nominal amount of Notes issued under the Programme from time to time:

- (a) the U.S. dollar equivalent of Notes denominated in another Specified Currency (as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under “Form of the Notes”) shall be determined, at the discretion of the Issuer, either as of the date on which agreement is reached for the issue of Notes or on the preceding day on which commercial banks and foreign exchange markets are open for business in London, in each case on the basis of the spot rate for the sale of the U.S. dollar against the purchase of such Specified Currency in the London foreign exchange market quoted by any leading international bank selected by the Issuer on the relevant day of calculation;
- (b) the U.S. dollar equivalent of Dual Currency Notes, Index Linked Notes and Partly Paid Notes (each as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under “Form of the Notes”) shall be calculated in the manner specified above by reference to the original nominal amount on issue of such Notes (in the case of Partly Paid Notes regardless of the subscription price paid); and
- (c) the U.S. dollar equivalent of Zero Coupon Notes (as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under “Form of the Notes”) and other Notes issued at a discount or a premium shall be calculated in the manner specified above by reference to the net proceeds received by the Issuer for the relevant issue.

## SUMMARY OF TERMS AND CONDITIONS OF THE NOTES AND THE PROGRAMME

*The following summary does not purport to be complete and is taken from, and is qualified in its entirety by, the remainder of this Information Memorandum and, in relation to the terms and conditions of any particular Tranche of Notes, the applicable Pricing Supplement. Words and expressions defined or used in “Form of the Notes” and “Terms and Conditions of the Notes” shall have the same meaning in this summary:*

<b>Issuer</b>	The Korea Development Bank, acting through its principal office in Korea, its Hong Kong Branch, its London Branch, its New York Branch, its Tokyo Branch, its Singapore Branch or any other overseas branch (as specified in the relevant Pricing Supplement).
<b>Arranger</b>	Crédit Agricole Corporate and Investment Bank
<b>Dealers</b>	Australia and New Zealand Banking Group Limited Barclays Bank PLC BNP Paribas Citigroup Global Markets Limited Commonwealth Bank of Australia (ABN 48 123 123 124) Crédit Agricole Corporate and Investment Bank Credit Suisse (Hong Kong) Limited Daiwa Capital Markets Singapore Limited Goldman Sachs International The Hongkong and Shanghai Banking Corporation Limited ING Bank N.V., Singapore Branch J.P. Morgan Securities plc KDB Asia Limited Mirae Asset Securities Co., Ltd MUFG Securities EMEA plc Merrill Lynch International Mizuho Securities Asia Limited Morgan Stanley & Co. International plc National Australia Bank Limited, a company incorporated in Australia with limited liability (ABN 12 004 044 937) Natixis Nomura Singapore Limited Société Générale Standard Chartered Bank The Toronto-Dominion Bank UBS AG Hong Kong Branch, a company incorporated in Switzerland with limited liability Wells Fargo Securities International Limited Wells Fargo Securities, LLC Westpac Banking Corporation

	and any other Dealers appointed in accordance with the Programme Agreement.
<b>Fiscal Agent</b>	Deutsche Bank AG, London Branch.
<b>Transfer Agents</b>	Deutsche Bank AG, Hong Kong Branch and Deutsche Bank Luxembourg S.A. or, if so specified in the applicable Pricing Supplement, Deutsche Bank Trust Company Americas.
<b>Exchange Agent</b>	Deutsche Bank AG, London Branch.
<b>Registrar</b>	Deutsche Bank Trust Company Americas or, if so specified in the applicable Pricing Supplement, Deutsche Bank AG, Hong Kong Branch or Deutsche Bank Luxembourg S.A.
<b>CMU Lodging Agent</b>	Deutsche Bank AG, Hong Kong Branch.
<b>Paying Agents</b>	Credit Suisse AG, Deutsche Bank Luxembourg S.A., Deutsche Bank Trust Company Americas, the Fiscal Agent and the CMU Lodging Agent.
<b>Amount</b>	Up to U.S.\$30,000,000,000 (or its equivalent in other currencies as described under “Description of the Programme”) outstanding at any one time. The Issuer may increase the amount of the Programme in accordance with the terms of the Programme Agreement.
<b>Description</b>	Continuously offered Global Medium Term Note Programme.
<b>Method of Distribution</b>	Subject to applicable selling restrictions, Notes may be distributed by way of private or public placement and in each case on a syndicated or non-syndicated basis.
<b>Currencies</b>	Subject to any applicable legal or regulatory restrictions, any currency as may be agreed between the Issuer and the relevant Purchaser(s).
<b>Maturities</b>	Such maturities (in excess of one month) as may be agreed between the Issuer and the relevant Purchaser(s), subject to such minimum or maximum maturities as may be allowed or required from time to time, by the relevant central bank (or equivalent body) or any laws or regulations applicable to the Issuer or the relevant Specified Currency.
<b>Issue Price</b>	Notes may be issued at par or at a discount to, or premium over, par and either on a fully paid or partly paid basis.
<b>Fixed Rate Notes</b>	Fixed interest will be payable on such date or dates as may be agreed between the Issuer and the relevant Dealer and on redemption, and will be calculated on the basis of such Day Count Fraction as may be agreed between the Issuer and the relevant Purchaser(s).
<b>Floating Rate Notes</b>	Floating Rate Notes will bear interest at a rate determined either: <ul style="list-style-type: none"> <li>(i) on the same basis as the floating rate under a notional interest rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions (published by the International Swaps</li> </ul>

	<p>and Derivatives Association, Inc., and as amended and updated as at the Issue Date of the first Tranche of the Notes of the relevant Series); or</p> <p>(ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; or</p> <p>(iii) on such other basis as may be agreed between the Issuer and the relevant Purchaser(s) (as indicated in the applicable Pricing Supplement).</p> <p>The Margin (if any) relating to such floating rate will be agreed between the Issuer and the relevant Purchaser(s) for each Series of Floating Rate Notes.</p> <p>In the event of the discontinuation of a reference rate applicable to a Series of Floating Rate Notes specified in the applicable Pricing Supplement, an alternative rate will be determined in the manner described in Condition 4(b)(ii)(B)(2) of the Terms and Conditions of the Notes.</p>
<b>Index Linked Notes</b>	<p>Payments of principal in respect of Index Linked Redemption Notes or of interest in respect of Index Linked Interest Notes will be calculated by reference to such index and/or formula or to changes in the prices of securities or commodities or to such other factors as the Issuer and the relevant Purchaser(s) may agree (as indicated in the applicable Pricing Supplement).</p>
<b>Other Provisions in Relation to Floating Rate Notes and Index Linked Interest Notes</b>	<p>Floating Rate Notes and Index Linked Interest Notes may also have a maximum interest rate, a minimum interest rate or both.</p> <p>Interest on Floating Rate Notes and Index Linked Interest Notes in respect of each Interest Period, as agreed prior to issue by the Issuer and the relevant Purchaser(s), will be payable on Interest Payment Dates and will be calculated on the basis of such Day Count Fraction, as may be agreed between the Issuer and the relevant Purchaser(s).</p>
<b>Change of Interest Basis</b>	<p>Notes may be converted from one Interest Basis to another in the Dual Currency Notes manner set out in the applicable Pricing Supplement.</p>
<b>Dual Currency Notes</b>	<p>Payments (whether in respect of principal or interest and whether at maturity or otherwise) in respect of Dual Currency Notes will be made in such currencies, and based upon such rates of exchange, as the Issuer and the relevant Purchaser(s) may agree (as indicated in the applicable Pricing Supplement).</p>
<b>Zero Coupon Notes</b>	<p>Zero Coupon Notes may be offered and sold at a discount to their nominal amount and will not bear interest.</p>
<b>Redemption</b>	<p>The applicable Pricing Supplement will indicate either that the relevant Notes cannot be redeemed prior to their stated maturity (other than in specified instalments (see below), if applicable, or for taxation reasons or following an Event of Default), or that such Notes will be redeemable at the option of the Issuer and/or</p>

	<p>the Noteholders upon giving not less than 30 nor more than 60 days' irrevocable notice (or such other notice period (if any) as is indicated in the applicable Pricing Supplement) to the relevant Noteholders or the Issuer, as the case may be, on a date or dates specified prior to such stated maturity and at a price or prices and on such other terms as may be agreed between the Issuer and the relevant Purchaser(s).</p> <p>The applicable Pricing Supplement may provide that the Notes may be redeemable in two or more instalments in such amounts and on such dates and on such other terms as are indicated in such Pricing Supplement.</p>
<b>Denominations of Notes</b>	<p>The Notes will be issued in such denominations as may be agreed between the Issuer and the relevant Purchaser(s) save that (i) the minimum denomination of each Note will be such amount as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the relevant Specified Currency, (ii) the minimum denomination of each Note admitted to trading on a regulated market within the EEA or offered to the public in a Member State of the EEA in circumstances which require the publication of a prospectus under the Prospectus Regulation will be €100,000 (or, if the Notes are denominated in a currency other than euro, the equivalent amount in such currency) and (iii) the Definitive IAI Registered Notes will be issued only in minimum denominations of U.S.\$500,000 and integral multiples of U.S.\$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency).</p>
<b>Redenomination</b>	<p>The applicable Pricing Supplement may provide that certain Notes may be redenominated in euro.</p>
<b>Taxation</b>	<p>All payments by the Issuer in respect of the Notes will be made without withholding or deduction for or on account of withholding taxes by any Tax Jurisdiction, subject as provided in Condition 7. In the event that any such deduction is made, the Issuer will, save in certain limited circumstances provided in Condition 7, be required to pay additional amounts to cover amounts so deducted.</p>
<b>Status</b>	<p>The Notes will be direct, unconditional, unsecured and unsubordinated general obligations of the Issuer and will rank <i>pari passu</i> among themselves, without any preference one over the other by reason of priority of date of issue or currency of payment or otherwise, and at least equally with all other outstanding unsecured and unsubordinated obligations of the Issuer subject, in the event of insolvency, to laws of general applicability relating to or affecting creditors' rights.</p>
<b>Negative Pledge</b>	<p>There will be a negative pledge pursuant to which the Issuer will undertake not to create or permit to subsist any mortgage, charge,</p>

	<p>encumbrance, pledge or other security interest upon the whole or any part of its assets to secure any indebtedness, or to secure any guarantee of indebtedness, unless the Notes shall be secured equally and rateably therewith, subject to certain exceptions as set out in Condition 3(b).</p>
<b>Cross Default</b>	<p>There will be a cross default in respect of External Indebtedness of the Issuer in an aggregate principal amount of U.S.\$10,000,000 or more. “External Indebtedness” means any obligation for the payment or repayment of money borrowed which is denominated in a currency other than Won — see Condition 8.</p>
<b>Listing</b>	<p>Approval in-principle has been received from the SGX-ST for permission to deal in, and quotation of any Notes that may be issued pursuant to the Programme and which are agreed at the time of issue thereof to be so listed on the SGX-ST. Such permission will be granted when such Notes have been admitted to the Official List of the SGX-ST. The Notes may also be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer in relation to each Series.</p> <p>For so long as any Notes are listed on the SGX-ST and the rules of the SGX-ST so require, such Notes will be traded on the SGX-ST in a minimum board lot size of S\$200,000 (or its equivalent in other currencies).</p> <p>Unlisted Notes may also be issued. The applicable Pricing Supplement will state whether or not the relevant Notes are to be listed and, if so, on which stock exchange(s).</p>
<b>Governing Law</b>	<p>The Notes and any non-contractual obligations arising out of or in connection with the Notes will be governed by, and construed in accordance with, English law.</p>
<b>Selling Restrictions</b>	<p>There are restrictions on the sale of Notes and the distribution of offering material — see “Subscription and Sale and Transfer and Selling Restrictions” on page 203.</p> <p>The Notes will be issued in compliance with U.S. Treasury Regulations §1.163-5(c)(2)(i)(D) (or any successor rules in substantially the same form that are applicable for purposes of Section 4701 of the U.S. Internal Revenue Code of 1986, as amended) (“TEFRA D”) unless the Notes are issued other than in circumstances in which the Notes will not constitute registration required obligations under the United States Tax Equity and Fiscal Responsibility Act of 1982 (“TEFRA”), which circumstances will be referred to in the applicable terms of such Notes as a transaction to which TEFRA is not applicable.</p>

## FORM OF THE NOTES

The Notes of each Series (as defined below) will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued outside the United States in reliance on Regulation S under the Securities Act (“Regulation S”) and Registered Notes will be issued both outside the United States in reliance on the exemption from registration provided by Regulation S and within the United States in reliance on Rule 144A or otherwise in private transactions that are exempt from the registration requirements of the Securities Act.

As used herein, “Tranche” means Notes which are identical in all respects (including as to listing and admission to trading) and “Series” means a Tranche of Notes together with any further Tranche or Tranches of Notes which are (a) expressed to be consolidated and form a single series and (b) identical in all respects (including as to listing and admission to trading) except for their respective Issue Dates, (unless this is a Zero Coupon Note) Interest Commencement Dates and/or Issue Prices.

### **Bearer Notes**

Each Tranche of Bearer Notes will initially be represented by a temporary global note (a “Temporary Bearer Global Note”) which will be delivered prior to the original issue date of the Tranche to either (i) a common depositary for Euroclear Bank SA/NV (“Euroclear”) and Clearstream Banking S.A. (“Clearstream, Luxembourg”) or (ii) a sub-custodian for the Hong Kong Monetary Authority (“HKMA”) as operator of the Central Moneymarkets Unit Service (the “CMU Service”).

Whilst any Bearer Note is represented by a Temporary Bearer Global Note, payment of principal and interest (if any) and any other amount payable in respect of the Notes due prior to the Exchange Date (as defined below) will be made against presentation of the Temporary Bearer Global Note only to the extent that certification (in a form to be provided) to the effect that the beneficial owners of interests in such Temporary Bearer Global Note are not U.S. persons or persons who have purchased for resale to any U.S. person, as required by U.S. Treasury regulations, has been received by Euroclear and/or Clearstream, Luxembourg and/or Deutsche Bank AG, Hong Kong Branch (the “CMU Lodging Agent”) and (in the case of a Temporary Bearer Global Note delivered to a common depositary for Euroclear and/or Clearstream, Luxembourg) Euroclear and/or Clearstream, Luxembourg, as applicable, has given a like certification (based on the certification it has received) to the Fiscal Agent.

On and after the date (the “Exchange Date”) which is 40 days after the date on which the Temporary Bearer Global Note is issued, interests in the Temporary Bearer Global Note will be exchangeable (provided that if it is a Partly Paid Note all instalments of the subscription monies due before the date of such exchange have been paid) upon request as described therein (a) unless otherwise specified in the applicable Pricing Supplement or the Temporary Bearer Global Note, for interests in a permanent global note (a “Permanent Bearer Global Note” and, together with a Temporary Bearer Global Note, each a “Bearer Global Note”) without Coupons, Receipts or Talons or (b) if specified in the applicable Pricing Supplement or the Temporary Bearer Global Note and subject to such notice period as is specified in the Pricing Supplement or the Temporary Bearer Global Note, for definitive Bearer Notes, in each case against certification of beneficial ownership as required by U.S. Treasury regulations in accordance with the terms of the Temporary Bearer Global Note unless certification has already been given pursuant to the first sentence of the preceding paragraph. The CMU Service may require that any such exchange for a Permanent Bearer Global Note is made in whole and not in part and in such event, no such exchange will be effected until all relevant account holders (as set out in a CMU Instrument Position Report (as defined in the rules of the CMU Service) or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) have so certified.

On and after the Exchange Date the holder of a Temporary Bearer Global Note will not be entitled to receive any payment of interest or principal thereon or other amount due on or after the Exchange Date unless, upon due certification, exchange of the Temporary Bearer Global Note for an interest in a Permanent Bearer Global Note or definitive Bearer Note is improperly withheld or refused.

Payments of principal and interest (if any) or any other amounts on a Permanent Bearer Global Note will be made through Euroclear and/or Clearstream, Luxembourg against presentation or surrender (as the case may be) of the Permanent Bearer Global Note without any requirement for certification.

In respect of a Bearer Global Note held through the CMU Service, any payments of principal, interest (if any) or any other amounts shall be made to the person(s) for whose account(s) interests in the relevant Bearer Global Note are credited (as set out in a CMU Instrument Position Report or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) and save in the case of final payment, no presentation of the relevant Bearer Global Note shall be required for such purpose.

The applicable Pricing Supplement will specify that a Permanent Bearer Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Bearer Notes with, where applicable, Receipts, Coupons and Talons attached upon either (i) not less than 60 days' written notice (a) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, Luxembourg, from Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the Fiscal Agent as described therein and/or (b) in the case of Notes held through the CMU Service, from the relevant account holders therein to the CMU Lodging Agent as described therein; or (ii) only upon the occurrence of an Exchange Event. For these purposes, "Exchange Event" means that (i) an Event of Default (as defined in Condition 8) has occurred and is continuing or (ii) the Issuer has been notified that either Euroclear or Clearstream, Luxembourg, and in the case of Notes cleared through the CMU Service, the CMU Service, have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no successor clearing system is available or (iii) the Issuer has or will become subject to adverse tax consequences which would not be suffered were the Bearer Notes represented by the Permanent Bearer Global Note in definitive form (provided that, where the Bearer Notes are held through Euroclear and/or Clearstream, Luxembourg, such adverse tax consequences are as a result of a change in, or amendment to, the laws or regulation in, or of, Tax Jurisdiction (as defined in Condition 7)). The Issuer will promptly give notice to Noteholders in accordance with Condition 12 if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, (a) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, Luxembourg, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) and/or, (b) in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Fiscal Agent or, as the case may be, the CMU Lodging Agent, requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer may also give notice to the Fiscal Agent or, as the case may be, the CMU Lodging Agent, requesting exchange. Any such exchange shall occur not later than 45 days after the date of receipt of the first relevant notice by the Fiscal Agent or, as the case may be, the CMU Lodging Agent.

The following legend will appear on all Bearer Notes which have an original maturity of more than 365 days and on all Coupons, Receipts and Talons:

"ANY UNITED STATES PERSON WHO HOLDS THIS OBLIGATION WILL BE SUBJECT TO LIMITATIONS UNDER THE UNITED STATES INCOME TAX LAWS INCLUDING THE LIMITATIONS PROVIDED IN SECTIONS 165(j) AND 1287(a) OF THE INTERNAL REVENUE CODE."

The sections referred to provide that United States holders, with certain exceptions, will not be entitled to deduct any loss on Bearer Notes, Receipts, Coupons or Talons and will not be entitled to capital gains treatment of any

gain on any sale, disposition or payment, redemption of principal in respect of such Bearer Notes, Receipts, Coupons or Talons.

Notes which are represented by a Bearer Global Note will only be transferable in accordance with the rules and procedures for the time being of Euroclear or Clearstream, Luxembourg or the CMU Service, as the case may be.

## **Registered Notes**

The Registered Notes of each Tranche offered and sold in reliance on Regulation S, which will be sold to non-U.S. persons outside the United States, will initially be represented by a global note in registered form (a “Regulation S Global Note”). Prior to expiry of the distribution compliance period (as defined in Regulation S) applicable to each Tranche of Notes, beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person save as otherwise provided in Condition 2 and may not be held otherwise than through Euroclear or Clearstream, Luxembourg or the CMU Service and such Regulation S Global Note will bear a legend regarding such restrictions on transfer.

The Registered Notes of each Tranche offered and sold in the United States or to U.S. persons may only be offered and sold in private transactions (i) to “qualified institutional buyers” within the meaning of Rule 144A under the Securities Act (“QIBs”) or (ii) to “accredited investors” (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions (“Institutional Accredited Investors”) and who execute and deliver an IAI Investment Letter (as defined in the Terms and Conditions of the Notes) in which they agree to purchase the Notes for their own account and not with a view to the distribution thereof. The Registered Notes of each Tranche sold to QIBs will be represented by a global note in registered form (a “Rule 144A Global Note” and, together with a Regulation S Global Note, each a “Registered Global Note”).

Registered Global Notes will either be deposited with (i) a custodian for, and registered in the name of a nominee of, the Depository Trust Company (“DTC”), (ii) a common depository for Euroclear and Clearstream, Luxembourg, and registered in the name of a common nominee of, Euroclear and Clearstream, Luxembourg, as specified in the applicable Pricing Supplement, or (iii) a sub-custodian for the HKMA as operator of the CMU Service, as specified in the applicable Pricing Supplement. Persons holding beneficial interests in Registered Global Notes will be entitled or required, as the case may be, under the circumstances described below, to receive physical delivery of definitive Notes in fully registered form.

The Registered Notes of each Tranche sold to Institutional Accredited Investors will be in definitive form, registered in the name of the holder thereof (“Definitive IAI Registered Notes”). Unless otherwise set forth in the applicable Pricing Supplement, Definitive IAI Registered Notes will be issued only in minimum denominations of U.S.\$500,000 and integral multiples of U.S.\$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency). Definitive IAI Registered Notes will be subject to the restrictions on transfer set forth therein and will bear the restrictive legend described under “Subscription and Sale and Transfer and Selling Restrictions”. Institutional Accredited Investors that hold Definitive IAI Registered Notes may not elect to hold such Notes through DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, but transferees acquiring such Notes in transactions exempt from Securities Act registration pursuant to Regulation S or Rule 144A under the Securities Act (if available) may do so upon satisfaction of the requirements applicable to such transfer as described under “Subscription and Sale and Transfer and Selling Restrictions”. The Registered Global Notes and the Definitive IAI Registered Notes will be subject to certain restrictions on transfer set forth therein and will bear a legend regarding such restrictions.

Payments of principal, interest and any other amount in respect of the Registered Global Notes will, in the absence of provision to the contrary, be made to the person shown on the Register (as defined in Condition 6(d)) as the registered holder of the Registered Global Notes at the close of business day before the relevant due date.

None of the Issuer, any Paying Agent or the Registrar will have any responsibility or liability for any aspect of the records relating to or payments or deliveries made on account of beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Payments of principal, interest or any other amount in respect of the Registered Notes in definitive form will, in the absence of provision to the contrary, be made to the persons shown on the Register as the registered holder of the Registered Notes in definitive form at the close of business on the third business day before the relevant due date.

Interests in a Registered Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Registered Notes without receipts, interest coupons or talons attached only upon the occurrence of an Exchange Event. For these purposes, “Exchange Event” means that (i) an Event of Default has occurred and is continuing, (ii) in the case of Notes registered in the name of a nominee for DTC, either DTC has notified the Issuer that it is unwilling or unable to continue to act as depository for the Notes and no alternative clearing system is available or DTC has ceased to constitute a clearing agency registered under the Exchange Act and no alternative clearing system is available, (iii) the Issuer has been notified that in the case of Notes registered in the name of a nominee for a common depository for Euroclear and Clearstream, Luxembourg, both Euroclear and Clearstream, Luxembourg, and in the case of Notes held through the CMU Service, the CMU Service, have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and, in any such case, no successor clearing system is available or (iv) the Issuer has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Registered Global Note in definitive form.

The Issuer will promptly give notice to Noteholders in accordance with Condition 12 if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, (a) in the case of Notes registered in the name of a nominee for DTC or a nominee for a Common Depository for Euroclear and/or Clearstream, Luxembourg, DTC, Euroclear and/or Clearstream, Luxembourg or any person acting on their behalf (acting on the instructions of any holder of an interest in such Registered Global Note) and/or, (b) in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Registrar or, as the case may be, the CMU Lodging Agent requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iv) above, the Issuer may also give notice to the Registrar or, as the case may be, the CMU Lodging Agent requesting exchange. Any such exchange shall occur not later than 10 days after the date of receipt of the first relevant notice by the Registrar or, as the case may be, the CMU Lodging Agent.

### **Transfer of Interests**

Interests in a Registered Global Note may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such interest in another Registered Global Note or in the form of a Definitive IAI Registered Note and Definitive IAI Registered Notes may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such Notes in the form of an interest in a Registered Global Note. No beneficial owner of an interest in a Registered Global Note will be able to transfer such interest, except in accordance with the applicable procedures of DTC, Euroclear, Clearstream, Luxembourg and the CMU Service, in each case to the extent applicable. Registered Notes are also subject to the restrictions on transfer set forth therein and will bear a legend regarding such restrictions, see “Subscription and Sale and Transfer and Selling Restrictions” on page 203.

## General

Pursuant to the Agency Agreement (as defined under “Terms and Conditions of the Notes”), the Fiscal Agent or, as the case may be, the CMU Lodging Agent shall arrange that, where a further Tranche of Notes is issued which is intended to form a single Series with an existing Tranche of Notes, the Notes of such further Tranche shall be assigned a common code and ISIN and, where applicable, a CMU instrument number, a CUSIP and CINS number which are different from the common code, ISIN, CMU instrument number, CUSIP and CINS assigned to Notes of any other Tranche of the same Series until at least the expiry of the distribution compliance period (as defined in Regulation S) applicable to the Notes of such Tranche.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear, Clearstream, Luxembourg and/or the CMU Service, each person (other than Euroclear, Clearstream, Luxembourg or the CMU Service) who is for the time being shown in the records of Euroclear, Clearstream, Luxembourg or the CMU Service as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream, Luxembourg or the CMU Service as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note and the expressions “Noteholder” and “holder of Notes” and related expressions shall be construed accordingly. Notwithstanding the above, if a Note (whether in global or definitive form) is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the Central Moneymarkets Unit Rules (“CMU Rules”) at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service (which notification, in either case, shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder and the principal amount of any Note credited to its account, save in the case of manifest error) and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

So long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and such Notes except to the extent that in accordance with DTC’s published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Notes may be accelerated by the holder thereof in certain circumstances described in “Terms and Conditions of the Notes — Events of Default”. In such circumstances, where such Notes are still represented by a Global Note and a holder with Euroclear, Clearstream, Luxembourg, the CMU Service or the DTC of such Notes so represented and credited to his securities account gives notice that it wishes to accelerate such Notes, unless within a period of 15 days from the giving of such notice payment has been made in full of the amount due in accordance with the terms of the Global Note, the Global Note will become void. At the same time, holders of interests in such Global Note credited to their accounts with Euroclear and/or Clearstream, Luxembourg and/or the CMU Service and/or DTC, as the case may be, will become entitled to proceed directly against the Issuer on the basis of statements of account provided by Euroclear, Clearstream, Luxembourg, DTC and the CMU Service, under the terms of an amended and restated deed of covenant (as amended and/or supplemented and/or restated from time to time, the “Deed of Covenant”) dated 10 October 2014 and executed by the Issuer. In addition, holders of interests in such Global Note credited to their accounts with DTC may require DTC to

deliver definitive Notes in registered form in exchange for their interest in such Global Note in accordance with DTC's standard operating procedures.

Any reference herein to Euroclear and/or Clearstream, Luxembourg and/or DTC and/or the CMU Service shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

The Issuer may agree with any Dealer that Notes may be issued in a form not contemplated by the Terms and Conditions of the Notes herein, in which event a new Information Memorandum or a supplement to the Information Memorandum, if appropriate, will be made available which will describe the effect of the agreement reached in relation to such Notes.

For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Issuer shall appoint and maintain a paying agent in Singapore, where the Notes may be presented or surrendered for payment or redemption, in the event that the Global Note or Global Certificate is exchanged for definitive Notes. In addition, in the event that a Global Note or Global Certificate is exchanged for definitive Notes, an announcement of such exchange will be made by the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the paying agent in Singapore.

### **Form of Pricing Supplement**

*Set out below is the form of Pricing Supplement which will be completed for each Tranche of Notes issued under the Programme.*

**[Date]**

### **THE KOREA DEVELOPMENT BANK**

**(acting through its [principal office in Korea]/[Hong Kong Branch]/[London Branch]/[New York Branch]/[Tokyo Branch]/[Singapore Branch]/[(specify other overseas branch) Branch])**  
**Issue of [Aggregate Nominal Amount of Tranche] [Title of Notes]**  
**under the U.S.\$30,000,000,000 Global Medium Term Note Programme**

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Conditions set forth in the Information Memorandum dated 25 August 2022 (the "Information Memorandum"). This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with such Information Memorandum.

*[The following alternative language applies if the first tranche of an issue which is being increased was issued under an Information Memorandum with an earlier date.]*

Terms used herein shall be deemed to be defined as such for the purposes of the Conditions (the "Conditions") set forth in the Information Memorandum dated [original date]. This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Information Memorandum dated [current date], save in respect of the Conditions which are extracted from the Information Memorandum dated [original date] and are attached hereto.]

[MiFID II product governance —Solely for the purposes of [the/each] manufacturer's product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the Notes to eligible counterparties and

professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a “distributor”) should take into consideration the manufacturer[‘s/s’] target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer[‘s/s’] target market assessment) and determining the appropriate distribution channels.]

[UK MiFIR product governance —Solely for the purposes of [the/each] manufacturer’s product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is only eligible counterparties, as defined in the FCA Handbook Conduct of Business Sourcebook (“COBS”), and professional clients, as defined in Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“UK MiFIR”); and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a “distributor”) should take into consideration the manufacturer[‘s/s’] target market assessment; however, a distributor subject to FCA Handbook Product Intervention and Product Governance Sourcebook (the “UK MiFIR Product Governance Rules”) is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer[‘s/s’] target market assessment) and determining the appropriate distribution channels]

*[The following legend should be included where item 15 below is marked as “Applicable”.]*

[PRIIPS REGULATION - PROHIBITION OF SALES TO EEA RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (“EEA”). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); (ii) a customer within the meaning of Directive (EU) 2016/97 (the “Insurance Distribution Directive”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (the “Prospectus Regulation”). Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.]<sup>1</sup>

[UK PRIIPs REGULATION – PROHIBITION OF SALES TO UK RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom (“UK”). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“EUWA”); (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the “FSMA”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or [(iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the “UK PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling

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<sup>1</sup> Legend to be included on front of the pricing supplement if the Notes potentially constitute “packaged” products or the issuer wishes to prohibit offers to EEA retail investors for any other reason, in which case the selling restriction should be specified to be “Applicable”.

the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.]

*[Include whichever of the following apply or specify as “Not Applicable” (N/A). Note that the numbering should remain as set out below, even if “Not Applicable” is indicated for individual paragraphs or sub-paragraphs. Italics denote directions for completing the Pricing Supplement.]*

[If the Notes have a maturity of less than one year from the date of their issue, the minimum denomination may need to be £100,000 or its equivalent in any other currency.]

[In connection with Section 309B of the Securities and Futures Act 2001 of Singapore (the “SFA”) and the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the “CMP Regulations 2018”), the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are [prescribed capital markets products]/[capital markets products other than prescribed capital markets products] (as defined in the CMP Regulations 2018) and [are] [Excluded]/[Specified] Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).]<sup>2</sup>

- |   |   |  |
|---|---|--|
| 1 | Issuer  | The Korea Development Bank, acting through its [principal office in Korea]/[Hong Kong Branch]/[London Branch]/[New York Branch]/[Tokyo Branch]/[Singapore Branch]/[(specify other overseas branch) Branch]   |
| 2 | (i) Series Number:  | [●]  |
|   | (ii) Tranche Number:  | [●]  |
|   |   | <i>(If fungible with an existing Series, details of that Series, including the date on which the Notes become fungible)</i>  |
| 3 | Specified Currency or Currencies:                               | [●]  |
| 4 | Aggregate Nominal Amount:                                       |  |
|   | (i) Series:   | [●]  |
|   | (ii) Tranche:   | [●] per cent. of the Aggregate Nominal Amount [plus accrued interest from [insert date] (if applicable)]   |
| 5 | (i) Issue Price of Tranche:                                     | [●]  |
|   | (ii) [Net Proceeds ( <i>Required only for listed issues</i> )]: | [●]  |
| 6 | (i) Specified Denominations:                                    | [●]  |
|   |   | <i>(N.B. In the case of Registered Notes, this means the minimum integral amount in which transfers can be made. For Registered Global Notes, consider including language substantially to the following effect (however, appropriate amendments</i> |

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<sup>2</sup> For any Notes to be offered to Singapore investors, the Issuer to consider whether it needs to re-classify the Notes pursuant to Section 309B of the SFA prior to the launch of the offer.

*should be made for different currencies) “EUR 100,000 and integral multiples of EUR 1,000 in excess thereof”)*

*(Note — where Bearer Notes with multiple denominations above U.S. \$200,000 or equivalent are being used the following sample wording should be followed:*

*“U.S.\$200,000 and integral multiples of U.S.\$1,000 in excess thereof up to and including U.S.\$399,000. No Notes in definitive form will be issued with a denomination above U.S.\$399,000.”*

*(N.B. If an issue of Notes is (i) NOT admitted to trading on a European Economic Area or United Kingdom exchange; and (ii) only offered in the European Economic Area or the United Kingdom in circumstances where a prospectus is not required to be published under the Prospectus Regulation the EUR100,000 minimum denomination is not required.)*

	(ii)	Calculation Amount:	<i>(If only one Specified Denomination, insert the Specified Denomination. If more than one Specified Denomination, insert the highest common factor. Note: there must be a common factor in the case of two or more Specified Denominations)</i>
7	(i)	Issue Date:	[●]
	(ii)	Interest Commencement Date:	[specify/Issue Date/Not Applicable] <i>(N.B. An Interest Commencement Date will not be relevant for certain Notes, for example Zero Coupon Notes.)</i>
8		Maturity Date:	<i>[Fixed rate — specify date/Floating rate — Interest Payment Date falling in or nearest to [specify month and year]]<sup>3</sup></i>
9		Interest Basis:	[[●] per cent. Fixed Rate] [[Specify Reference Rate] +/- [●] per cent. Floating Rate] [Zero Coupon] [Index Linked Interest] [Dual Currency Interest] [specify other] (further particulars specified below)
10		Redemption/Payment Basis:	[Redemption at par]

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<sup>3</sup> Note that for Hong Kong dollar and Renminbi denominated Fixed Rate Notes where the Interest Payment Dates are subject to modification it will be necessary to use the second option here.

- [Index Linked Redemption]  
 [Dual Currency Redemption]  
 [Partly Paid]  
 [Instalment]  
 [specify other]
- 11 Change of Interest or Redemption/Payment Basis: [Specify details of any provision for change of Notes into another Interest Basis or Redemption/Payment Basis]
- 12 Put/Call Options: [Investor Put]  
 [Issuer Call]  
 [(further particulars specified below)]
- 13 Listing: [Singapore/specify other/None]
- 14 Method of distribution: [Syndicated/Non-syndicated]
- 15 Prohibition of Sales to EEA and UK Retail Investors: [Applicable/Not Applicable]  
*(If the Notes clearly do not constitute “packaged” products, “Not Applicable” should be specified. If the Notes may constitute “packaged” products and no KID will be prepared, “Applicable” should be specified)*

#### **PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE**

- 16 Fixed Rate Note Provisions: [Applicable/Not Applicable]  
*(If not applicable, delete the remaining subparagraphs of this paragraph)*
- (i) Rate(s) of Interest: [●] per cent. per annum [payable [annually/semi-annually/quarterly] in arrear] *(If payable other than annually, consider amending Condition 4)*
- (ii) Interest Payment Date(s): [[●] in each year up to and including the Maturity Date, commencing on [●]]/[specify other]  
*(NB: This will need to be amended in the case of long or short coupons)*
- (iii) Fixed Coupon Amount(s): *(Applicable to Notes in definitive form)* [[●] per Calculation Amount/As per Condition 4(a)(II)]
- (iv) Broken Amount(s): *(Applicable to Notes in definitive form)* [●] per Calculation Amount, payable on the Interest Payment Date falling [in/on] [●]/As per Condition 4(a)(II))
- (v) Day Count Fraction: [Actual/Actual(ICMA) or 30/360 or Actual/365 (Fixed) or [specify other]] [Not Applicable]<sup>4</sup>
- (vi) [Determination Date(s): [●] in each year]

<sup>4</sup> Applicable if Condition 4(a)(I) is specified as being applicable in paragraph 16(viii).

		<i>(Insert regular interest payment dates, ignoring issue date or maturity date in the case of a long or short first or last coupon. N.B. This will need to be amended in the case of regular interest payment dates which are not of equal duration)</i>
		<i>NB: Only relevant where Day Count Fraction is Actual/Actual (ICMA))]</i>
	(vii) Business Centre(s):	[Hong Kong or [●]] <sup>5</sup> [Not Applicable]
	(viii) Other terms relating to the method of calculating interest for Fixed Rate Notes:	[Condition 4(a)(I) applies/Condition 4(a)(II) applies. The Fiscal Agent will act as the Calculation Agent./None/Give details]
17	Floating Rate Note Provisions:	[Applicable/Not Applicable] <i>(If not applicable, delete the remaining subparagraphs of this paragraph.)</i>
	(i) Specified Period(s)/Specified Interest Payment Dates:	[●] <i>[For the avoidance of doubt, Specified Interest Payment Dates are not subject to adjustment under (ii) below (Business Day Convention)]</i> <sup>6</sup>
	(ii) Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/Not Applicable <sup>7</sup> [specify other]]
	(iii) Additional Business Centre(s):	[●]
	(iv) Manner in which the Rate of Interest and Interest Amount is to be determined:	[Screen Rate Determination/ ISDA Determination/ specify other]
	(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Fiscal Agent):	[●]
	(vi) Screen Rate Determination:	
	• Reference Rate:	[●] <i>(Either EURIBOR, HIBOR, SOFR Benchmark or other, although additional information is required if other — including fallback provisions in the Agency Agreement)</i>
	• Interest Determination Date(s):	[●] <i>(First day of each Interest Period if Hong Kong dollar HIBOR and the second day on which the TARGET2 System is open prior to the start of each Interest Period if EURIBOR)</i>

<sup>5</sup> Applicable if Condition 4(a)(II) is specified as being applicable in paragraph 16(viii).

<sup>6</sup> If Interest Amount is to be determined on an unadjusted basis, specify Interest Payment Dates and insert italicised wording.

<sup>7</sup> Only relevant if the Interest Amount is determined on an adjusted basis.

- Relevant Screen Page: ☐   
*(In the case of EURIBOR, if not Reuters page EURIBOR01 ensure it is a page which shows a composite rate or amend the fallback provisions appropriately)*
  - SOFR Benchmark ☐   
[Not Applicable/Compounded Daily SOFR/SOFR Index]   
*(Only applicable where the Reference Rate is SOFR)*
  - Compounded Daily SOFR ☐   
[Not Applicable/SOFR Lag/SOFR Observation Shift]   
*(Only applicable in the case of Compounded Daily SOFR)*
  - Lookback Days ☐   
[Not Applicable/☐ U.S. Government Securities Business Day(s)]   
*(Only applicable in the case of SOFR Lag)*
  - SOFR Observation Shift Days ☐   
[Not Applicable/☐ U.S. Government Securities Business Day(s)] which shall not be less than three U.S. Government Securities Business Days at any time and shall, unless otherwise agreed with the Calculation Agent (or such other person specified in the applicable Final Terms as the party responsible for calculating the Rate of Interest), be no less than five U.S. Government Securities Business Days;   
*(Only applicable in the case of SOFR Observation Shift or SOFR Index)*
  - SOFR Index<sub>start</sub> ☐   
[Not Applicable/☐ U.S. Government Securities Business Day(s)]   
*(Only applicable in the case of SOFR Index)*
  - SOFR Index<sub>end</sub> ☐   
[Not Applicable/☐ U.S. Government Securities Business Day(s)]   
*(Only applicable in the case of SOFR Index)*
- (vii) ISDA Determination:
- Floating Rate Option: ☐
  - Designated Maturity: ☐
  - Reset Date: ☐   
[☐] (provided that such Reset Date shall not be less than five U.S. Government Securities Business Days prior to the Interest Payment Date unless expressly agreed with the Calculation Agent (or such other person specified in the applicable Final Terms as the party responsible for calculating the Rate of Interest))
- (viii) Margin(s): ☐   
[+/-] [☐] per cent., per annum

	(ix)	Minimum Rate of Interest:	[●] per cent., per annum
	(x)	Maximum Rate of Interest:	[●] per cent., per annum
	(xi)	Day Count Fraction:	[Actual/Actual (ISDA) Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360 30E/360 30E/360 (ISDA) Other] (See Condition 4 for alternatives)
	(xii)	Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	[●]
18		Zero Coupon Note Provisions:	[Applicable/Not Applicable] (If not applicable, delete the remaining subparagraphs of this paragraph)
	(i)	Accrual Yield:	[●] per cent. per annum
	(ii)	Reference price:	[●]
	(iii)	Any other formula/basis of determining amount payable:	[●]
	(iv)	Day Count Fraction in relation to Early Redemption Amounts and late payment:	[Condition 5(f) (iii) applies/specify other] (Consider applicable Day Count Fraction if not U.S. dollar denominated)
19		Index Linked Interest Note Provisions:	[Applicable/Not Applicable] (If not applicable, delete the remaining subparagraphs of this paragraph)
	(i)	Index/Formula:	[give or annex details]
	(ii)	Calculation Agent:	[●]
	(iii)	Party responsible for calculating the Rate of Interest (if not the Calculation Agent): and Interest Amount (if not the Fiscal Agent):	[●]
	(iv)	Provisions for determining coupon where calculation by reference to Index and/or Formula is impossible or impracticable:	[need to include a description of market disruption or settlement disruption events and adjustment provisions]
	(v)	Specified Period(s)/Specified Interest Payment Dates:	[●]

- (vi) Business Day Convention: [Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/specify other]
- (vii) Additional Business Centre(s): [●]
- (viii) Minimum Rate of Interest: [●] per cent. per annum
- (ix) Maximum Rate of Interest: [●] per cent. per annum
- (x) Day Count Fraction: [●]
- 20 Dual Currency Note Provisions: [Applicable/Not Applicable]  
(If not applicable, delete the remaining subparagraphs of this paragraph)
- (i) Rate of Exchange/method of calculating Rate of Exchange: [give or annex details]
- (ii) Party, if any, responsible for calculating the principal and/or interest due (if not the Fiscal Agent): [●]
- (iii) Provisions applicable where calculation by reference to Rate of Exchange impossible or impracticable: [need to include a description of market disruption or settlement disruption events and adjustment provisions]
- (iv) Person at whose option Specified Currency(ies) is/are payable: [●]

## PROVISIONS RELATING TO REDEMPTION

- 21 Issuer Call: [Applicable/Not Applicable]  
(If not applicable, delete the remaining subparagraphs of this paragraph)
- (i) Optional Redemption Date(s): [●]
- (ii) Optional Redemption Amount and [[●] method, if any, of calculation of such amount(s): [●] per Calculation Amount/specify other/see Appendix]
- (iii) If redeemable in part:  
Minimum Redemption Amount: [●]  
Maximum Redemption Amount: [●]
- (iv) Notice period (if other than as set out in the Conditions): [●]  
(N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Fiscal Agent)

- 22 Investor Put: [Applicable/Not Applicable]  
*(If not applicable, delete the remaining subparagraphs of this paragraph)*
- (i) Optional Redemption Date(s): [●]
- (ii) Optional Redemption Amount of each Note and method, if any, of calculation Notice period (if other than as set out in the Conditions):of such amount(s): [[●] per Calculation Amount/specify other/see Appendix]
- (iii) Notice period (if other than as set out in the Conditions): [●]  
*(N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Fiscal Agent)*
- 23 Final Redemption Amount: [[●] per Calculation Amount/specify other/see Appendix]
- 24 Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 5(f)): [[●] per Calculation Amount/specify other/see Appendix]

#### **GENERAL PROVISIONS APPLICABLE TO THE NOTES**

- 25 Form of Notes:<sup>8</sup> [Bearer Notes:  
 [Temporary Bearer Global Note exchangeable for a Permanent Bearer Global Note which is exchangeable for Definitive Bearer Notes [on 60 days' notice given at any time/only upon an Exchange Event]\*]  
 [Temporary Bearer Global Note exchangeable for Definitive Bearer Notes on and after the Exchange Date]  
 \* *(Ensure that this is consistent with the wording in the "Form of the Notes" section in the Information Memorandum and the Notes themselves. N.B. The exchange upon notice/at any time options should not be expressed to be applicable if the Specified Denomination of the Notes in paragraph 6 includes*

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<sup>8</sup> [A subscription agreement substantially in the form set out in the Programme Agreement must be entered into if the Notes are to be issued pursuant to Rule 144A or Section 4(a)(2).]

*language substantially to the following effect: “U.S.\$200,000 and integral multiples of U.S.\$1,000 in excess thereof up to and including U.S.\$399,000.” Furthermore, such Specified Denomination construction is not permitted in relation to any issue of Notes which is to be represented on issue by a Temporary Bearer Global Note exchangeable for Definitive Bearer Notes)]*

[Registered Notes:

[Regulation S Global Note (U.S.\$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg/held through the CMU Service]]

[Rule 144A Global Note (U.S.\$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg/held through the CMU Service]

[Definitive IAI Registered Notes] (In the case of an issue with more than one Global Note or a combination of one or more Global Notes and Definitive IAI Notes, specify the nominal amounts of each Global Note and, if applicable, the aggregate nominal amount of all Definitive IAI Notes if such information is available)]

26 Additional Financial Centre(s) or other special provisions relating to Payment Day:

[Not Applicable/give details]

*(Note that this paragraph relates to the place of payment and not Interest Period end dates to which sub-paragraphs 16(iii) and 18(vi) relate)*

27 Talons for future Coupons or Receipts to be attached to Definitive Notes in bearer form (and dates on which such Talons mature):

[Yes/No. If yes, give details]

28 Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:

[Not Applicable/give details. NB: a new form of Temporary Global Note and/or Permanent Global Note may be required for Partly Paid issues]

29 Details relating to Instalment Notes:

(i) Instalment Amount(s):

[Not Applicable/give details]

(ii) Instalment Date(s):

[Not Applicable/give details]

30 Redenomination applicable:

Redenomination [not] applicable

*[[if Redenomination is applicable, specify the applicable Day Count Fraction and any provisions necessary to deal with floating rate interest calculation (including alternative reference rates)]]*

*[[if Redenomination is applicable, specify the terms of the redenomination in an Annex to the Pricing Supplement]]*

31 Other terms or special conditions: [Not Applicable/give details]

## **DISTRIBUTION**

32 (i) If syndicated, names of Managers: [Not Applicable/give names]

(ii) Date of [Subscription] Agreement: [•]

(iii) Stabilising Manager (if any): [Not Applicable/give names]

33 If non-syndicated, name of relevant Dealer: [Not Applicable/give names]

34 U.S. Selling Restrictions<sup>9</sup>: [Reg. S Category 2; TEFRA D/TEFRA not applicable]

35 Additional selling restrictions: [Not Applicable/give details]

## **OPERATIONAL INFORMATION**

36 Any clearing system(s) other than Euroclear and Clearstream, Luxembourg or DTC and the relevant identification number(s): [CMU Service/Not Applicable/give name(s) and number(s)]

37 Delivery: Delivery [against/free of] payment

38 Additional Paying Agent(s) (if any): [•]

39 [In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:] [Not Applicable/Luxembourg/Hong Kong]

40 [In the case of Bearer Notes, specify the location of the office of the Fiscal Agent if other than London:] [Not Applicable/Hong Kong]

ISIN: [•]

Common Code: [•]

LEI: [[549300ML2LNRZUCS7149] (principal office)]/  
[[9884008H9HW0YBMTJT20] (Hong Kong Branch)]/ [[213800UVBWYXM97HSY04] (London Branch)]/[[•] (New York Branch)]/[[•] (Tokyo Branch)]/ [549300XPNL3J2VYAWN77] (Singapore Branch)]/[[•]](for any other Branch)]

*(insert here any other relevant codes such as a CMU instrument number, CUSIP and CINS codes)*

## **[RISK REGARDING BENCHMARK REGULATION REFORMS]**

<sup>9</sup> Ensure that the level of disclosure contained in the Information Memorandum is appropriate in the case of Notes issued pursuant to Rule 144A or Section 4(a)(2).

Interest rates and indices which are deemed to be or are used as “benchmarks” are the subject of recent international regulatory guidance and proposals for reform, particularly in the United Kingdom. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past or to disappear entirely or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on any Notes linked to or referencing such a benchmark. Regulation (EU) 2016/1011 (the “**Benchmarks Regulation**”) was published in the Official Journal of the EU on 29 June 2016 and applies from 1 January 2018 (with the exception of provisions specified in Article 59 (mainly on critical benchmarks) that apply from 30 June 2016 and 3 July 2016). The Benchmarks Regulation applies to the provision of benchmarks, the contribution of input data to a benchmark and the use of a benchmark within the EU. It will, among other things, (i) require benchmark administrators to be authorised or registered (or, if non-EU-based, to be subject to an equivalent regime or otherwise recognised or endorsed) and (ii) prevent certain uses by EU supervised entities of benchmarks of administrators that are not authorised or registered (or, if non-EU based, not deemed equivalent or recognised or endorsed).

The Benchmarks Regulation could have a material impact on any Notes linked to or referencing a benchmark, in particular, if the methodology or other terms of the benchmark are changed in order to comply with the requirements of the Benchmarks Regulation. Such changes could, among other things, have the effect of reducing, increasing or otherwise affecting the volatility of the published rate or level of the benchmark.

More broadly, any of the international reforms, particularly in the United Kingdom or the general increased regulatory scrutiny of benchmarks, could increase the costs and risks of administering or otherwise participating in the setting of a benchmark and complying with any such regulations or requirements. For example, the sustainability of LIBOR has been questioned as a result of the absence of relevant active underlying markets and possible disincentives (including as a result of regulatory reforms) for market participants to continue contributing to such benchmarks. On 27 July 2017, the United Kingdom Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR benchmark after 2021 (the “**FCA Announcement**”). The FCA Announcement indicated that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. On 5 March 2021, the FCA announced that (i) the publication of 24 LIBOR settings (as detailed in the FCA announcement) will cease immediately after 31 December 2021, (ii) the publication of the overnight and 12-month U.S. dollar LIBOR settings will cease immediately after 30 June 2023, (iii) immediately after 31 December 2021, the 1-month, 3-month, and 6-month sterling LIBOR settings will no longer be representative of the underlying market and economic reality that they are intended to measure and representativeness will not be restored (and the FCA will consult on requiring the ICE Benchmark Administration Limited (the “**IBA**”) to continue to publish these settings on a synthetic basis, which will no longer be representative of the underlying market and economic reality that they are intended to measure, for a further period after end 2021) and (iv) immediately after 30 June 2023, the 1-month, 3-month, and 6-month U.S. dollar LIBOR settings will no longer be representative of the underlying market and economic reality they are intended to measure and representativeness will not be restored (and the FCA will consider the case for using its proposed powers to require IBA to continue publishing these settings on a synthetic basis, which will no longer be representative of the underlying market and economic reality they are intended to measure, for a further period after end June 2023).

The elimination of the LIBOR benchmark or any other benchmark, or changes in the manner of administration of any benchmark, could require an adjustment to the terms and conditions, or result in other consequences, in respect of any Notes linked to such benchmark (including, but not limited to, floating rate Notes whose interest rates are linked to LIBOR). Such factors may have the following effects on certain benchmarks: (i) discourage market participants from continuing to administer or contribute to the benchmark; (ii) trigger

changes in the rules or methodologies used in the benchmark; or (iii) lead to the disappearance of the benchmark.

Any of the above changes or any other consequential changes as a result of international reforms, particularly in the United Kingdom, or other initiatives or investigations, could have a material adverse effect on the value of and return on any Notes linked to or referencing a benchmark.

Investors should consult their own independent advisers and make their own assessment about the potential risks imposed by the Benchmarks Regulation or any other international reforms, particularly in the United Kingdom, in making any investment decision with respect to any Notes linked to or referencing a benchmark. Investors should be aware that, if LIBOR were discontinued or otherwise unavailable, the rate of interest on Floating Rate Notes which reference LIBOR will be determined for the relevant period by the fall-back provisions applicable to such Notes. Depending on the manner in which the LIBOR rate is to be determined under the Terms and Conditions of the Notes, this may (i) if ISDA Determination applies, be reliant upon the provision by reference banks of offered quotations for the LIBOR rate which, depending on market circumstances, may not be available at the relevant time or (ii) if Screen Rate Determination applies, result in the effective application of a fixed rate based on the rate which applied in the previous period when LIBOR was available. In addition, the Terms and Conditions of the Notes provide that we may appoint an Independent Adviser to determine a Successor Rate or an Alternative Rate applicable to Floating Rate Notes if a Benchmark Event occurs (each term as defined in “*Terms and Conditions of the Notes*”). Any of the foregoing could have an adverse effect on the value or liquidity of, and return on, any Floating Rate Notes which reference LIBOR.] *(To be inserted in the case of a floating rate note issuance).*

#### **[LISTING APPLICATION]**

This Pricing Supplement comprises the final terms required to list the issue of Notes described herein pursuant to the U.S.\$30,000,000,000 Global Medium Term Note Programme of The Korea Development Bank, acting through its [principal office in Korea]/[Hong Kong Branch]/[London Branch]/[New York Branch]/[Tokyo Branch]/[Singapore Branch]/[*(specify other overseas branch)*] Branch].

The Singapore Exchange Securities Trading Limited (the “SGX-ST”) assumes no responsibility for the correctness of any of the statements made or opinions expressed or reports contained in this Pricing Supplement. Admission of the Notes to the Official List of the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Programme or the Notes.]

#### **RESPONSIBILITY**

The Issuer accepts responsibility for the information contained in this Pricing Supplement.

Signed on behalf of the Issuer:

By: \_\_\_\_\_

*Duly authorised*

Notes may also be issued in such other form and on such other terms as the Issuer may from time to time agree with the relevant Purchaser(s). If the relevant Pricing Supplement relating to a Tranche of Notes specifies any modifications to the Terms and Conditions of the Notes as described below, it is envisaged that, to the extent that such modifications relate only to Conditions 1, 4, 5 (except Condition 5(b)), 6, 10, 12 (insofar as such Notes are not listed or admitted to trade on any stock exchange), 13 or 14, they will not necessitate the preparation of supplementary listing particulars. If the Terms and Conditions of the Notes are to be modified in any other respect, it is envisaged that supplementary listing particulars or, if appropriate, further listing particulars describing the modifications will be prepared.

## TERMS AND CONDITIONS OF THE NOTES

*The following are the Terms and Conditions of the Notes to be issued by the Issuer which will be incorporated by reference into each Global Note (as defined below) and each definitive Note, in the latter case only if permitted by the relevant stock exchange (if any) and agreed by the Issuer and the relevant Purchaser(s) at the time of issue but if not so permitted and agreed, such definitive Note will have endorsed upon or attached thereto such Terms and Conditions. The applicable Pricing Supplement in relation to any Tranche of Notes may specify other terms and conditions which shall to the extent so specified or to the extent inconsistent with the following Terms and Conditions, replace or modify the following Terms and Conditions for the purpose of such Notes. The applicable Pricing Supplement (or the relevant provisions thereof) will be endorsed upon, or attached to, each Global Note and definitive Note. Reference should be made to “Form of the Notes” above for the form of Pricing Supplements which will specify which terms are to apply in relation to the relevant Notes.*

This Note is one of a Series (as defined below) of Notes issued by The Korea Development Bank (the “Issuer”) pursuant to the Agency Agreement (as defined below). The applicable Pricing Supplement (as defined below) will indicate whether the Issuer is acting in relation to the Notes through its principal office in Korea, its Hong Kong Branch, its London Branch, its New York Branch, its Tokyo Branch, its Singapore Branch or any other overseas branch.

References herein to the Notes shall be references to the Notes of this Series and shall mean:

- (a) in relation to any Notes represented by a global Note (a “Global Note”), units of each Specified Denomination in the Specified Currency;
- (b) any Global Note;
- (c) any definitive Notes in bearer form (“Bearer Notes”) issued in exchange for a Global Note in bearer form; and
- (d) any definitive Notes in registered form (“Registered Notes”) (whether or not issued in exchange for a Global Note in registered form).

The Notes, the Receipts and the Coupons have the benefit of an Agency Agreement (such Agency Agreement as amended and/or supplemented and/or restated from time to time, the “Agency Agreement”) dated 15 June 2012 and made between the Issuer, Deutsche Bank AG, London Branch as issuing agent, fiscal agent and agent bank (the “Fiscal Agent” which expression shall include any successor as fiscal agent), Deutsche Bank AG, Hong Kong Branch as CMU lodging agent (the “CMU Lodging Agent”, which expression shall include any successor CMU lodging agent) and the other paying agents named therein (together with the Fiscal Agent and the CMU Lodging Agent, the “Paying Agents” which expression shall include any additional or successor paying agents), Deutsche Bank AG, London Branch as exchange agent (the “Exchange Agent”, which expression shall include any successor exchange agent) and Deutsche Bank Trust Company Americas (or, if so specified in the applicable Pricing Supplement, Deutsche Bank Luxembourg S.A.) as registrar (the “Registrar”, which expression shall include any successor registrar) and a transfer agent and the other transfer agents named therein (together with the Registrar, the “Transfer Agents”, which expression shall include any additional or successor transfer agents). For the purposes of these Terms and Conditions, all references to the Fiscal Agent shall, with respect to a Series of Notes to be held in the CMU Service (as defined below), be deemed to be a reference to the CMU Lodging Agent and all such references shall be construed accordingly.

All of the Notes from time to time issued by the Issuer which are for the time being outstanding are hereinafter referred to as the “Notes” and the term “Note” is to be construed accordingly. As used herein, “Series” means each original issue of Notes together with any further issues expressed to form a single issue with the original issue and the terms of which are (save for the Issue Date, the Interest Commencement Date and/or the Issue

Price) otherwise identical (including whether or not the Notes are listed) and which are consolidated and form a single series and shall be deemed to include the temporary and permanent Global Notes and the definitive Notes of such Series and the expressions “Notes of the relevant Series” and “holders of Notes of the relevant Series” and related expressions shall be construed accordingly. As used herein, “Tranche” means all Notes of the same Series with the same Issue Date and Interest Commencement Date.

The Pricing Supplement in relation to this Note is attached hereto or endorsed hereon and supplements these Terms and Conditions and may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Terms and Conditions, replace or modify these Terms and Conditions for the purposes of this Note. References herein to the “applicable Pricing Supplement” are to the Pricing Supplement attached hereto or endorsed hereon.

The holders for the time being of the Notes (“Noteholders”), which expression shall, in relation to any Notes represented by a Global Note, be construed as provided in Condition 1, the holders of the Coupons (as defined below) appertaining to interest-bearing definitive Notes (the “Couponholders”), the holders of the Talons (as defined below) and the holders of the Receipts (as defined below) (the “Receiptholders”) are deemed to have notice of, and are entitled to the benefit of, all the provisions of the Agency Agreement, which are binding on them.

Words and expressions defined in the Agency Agreement or defined or set out in the applicable Pricing Supplement shall have the same meanings where used in these Terms and Conditions unless the context otherwise requires or unless otherwise stated and provided that, in the event of inconsistency between the Agency Agreement and the applicable Pricing Supplement, the applicable Pricing Supplement will prevail. Copies of the Agency Agreement and the Pricing Supplement for the Notes of this Series are available from the specified office of each of the Paying Agents save that, in the case of any Pricing Supplement where the Note or Notes to which such Pricing Supplement relates are not listed on a stock exchange, such Pricing Supplement shall be available for inspection only, upon proof satisfactory to the relevant Paying Agent as to identity, by the holder of any Note to which such Pricing Supplement relates. The statements in these Terms and Conditions are summaries of, and are subject to, the detailed provisions of the Agency Agreement.

The Noteholders, the Receiptholders and the Couponholders are entitled to the benefit of an amended and restated deed of covenant (as amended and/or supplemented and/or restated from time to time, the “Deed of Covenant”) dated 15 June 2012 and a deed poll (as amended and/or supplemented and/or restated from time to time, the “Deed Poll”) dated 15 June 2012, each made by the Issuer. The original of the Deed of Covenant is held by a common depositary on behalf of Euroclear (as defined below) and Clearstream, Luxembourg (as defined below). Copies of the Deed of Covenant and Deed Poll may be obtained upon request during normal business hours from the specified offices of each of the Fiscal Agent, the Registrar and the other Paying Agents, the Exchange Agent and the other Transfer Agents (such Agents and the Registrar being together referred to as the “Agents”).

## **1 Form, Denomination and Title**

The Notes are in bearer form or in registered form as specified in the applicable Pricing Supplement in the Specified Currency and Specified Denomination(s) and definitive Notes of this Series will be serially numbered. Notes of one Specified Denomination may not be exchanged for Notes of another Specified Denomination and Bearer Notes may not be exchanged for Registered Notes and *vice versa*.

This Note may be a Fixed Rate Note, a Floating Rate Note, a Zero Coupon Note, a Dual Currency Interest Note, or an Index Linked Interest Note or a combination of any of the foregoing, depending upon the Interest Basis specified in the applicable Pricing Supplement.

This Note may be an Index Linked Redemption Note, a Dual Currency Redemption Note, a Partly Paid Note, an Instalment Note or a combination of any of the foregoing, depending on the Redemption/Payment Basis shown in the applicable Pricing Supplement.

Definitive Bearer Notes are issued with interest coupons for the payment of interest (“Coupons”) attached, and if applicable, talons for further Coupons (“Talons”) attached, unless it is a Zero Coupon Note in which case references to Coupons and Couponholders in these Terms and Conditions are not applicable. If it is a definitive Bearer Note redeemable in instalments, it is issued with receipts (“Receipts”) attached for the payment of instalments of principal prior to such Bearer Note’s stated maturity. Registered Notes and Global Notes do not have Receipts, Coupons or Talons attached on issue.

Subject as set out below, title to the Bearer Notes, the Coupons and Receipts will pass by delivery and title to the Registered Notes will pass upon registration of transfers in accordance with the provisions of the Agency Agreement. The Issuer and any Paying Agents will (except as otherwise required by law) deem and treat the bearer of any Bearer Note, Coupon or Receipt and the registered holder of any Registered Note as the absolute owner thereof (whether or not overdue and notwithstanding any notice of ownership or writing thereon or notice of any previous loss or theft thereof) for all purposes but, in the case of any Global Note, without prejudice to the provisions set out below.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear Bank SA/NV (“Euroclear”) and/or Clearstream Banking S.A. (“Clearstream, Luxembourg”) and/or a subcustodian for the Central Moneymarkets Unit Service operated by the Hong Kong Monetary Authority (the “CMU Service”), each person (other than Euroclear, Clearstream, Luxembourg or the CMU Service) who is for the time being shown in the records of Euroclear, Clearstream, Luxembourg or the CMU Service as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream, Luxembourg or the CMU Service as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated, as between the Issuer and the holder of the Global Note, as a holder of such nominal amount of such Notes for all purposes other than for payment of principal (including premium (if any)) and interest on such Notes, the right to which shall be vested, as against the Issuer and any of the Paying Agents, solely in the bearer of the Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and any Agent as the holder of such nominal amount of such Notes in accordance with and subject to its terms (and the expressions “Noteholder”, “holder of Notes” and related expressions shall be construed accordingly). Notwithstanding the above, if a Note (whether in global or definitive form) is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the CMU Rules at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service (which notification, in either case, shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder and the principal amount of any Note credited to its account, save in the case of manifest error) (“CMU Accountholders”) and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

For so long as the Depository Trust Company (“DTC”) or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and the Notes except to the extent that in accordance with DTC’s published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Notes which are represented by a Global Note will be transferable only in accordance with the rules and procedures of DTC, Euroclear, Clearstream, Luxembourg and the CMU Service, as the case may be. Any

reference herein to DTC, Euroclear, Clearstream, Luxembourg and/or the CMU Service shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearance system approved by the Issuer and the Fiscal Agent.

## **2 Transfers of Registered Notes**

### **(a) Transfers of interests in Registered Global Notes**

Transfers of beneficial interests in Registered Global Notes will be effected by DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as the case may be, and, in turn, by other participants and, if appropriate, indirect participants in such clearing systems acting on behalf of transferors and transferees of such interests. A beneficial interest in a Registered Global Note will, subject to compliance with all applicable legal and regulatory restrictions, be transferable for Notes in definitive form or for a beneficial interest in another Registered Global Note only in the authorised denominations set out in the applicable Pricing Supplement and only in accordance with the rules and operating procedures for the time being of DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as the case may be, and in accordance with the terms and conditions specified in the Agency Agreement. Transfers of a Registered Global Note registered in the name of a nominee or sub-custodian for DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as the case may be, shall be limited to transfers of such Registered Global Note, in whole but not in part, to another nominee or sub-custodian of DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as the case may be, or to a successor of DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as the case may be, or such successor's nominee or subcustodian.

### **(b) Transfers of Registered Notes in definitive form**

Subject as provided in Conditions 2(e), (f) and (g) below, upon the terms and subject to the conditions set forth in the Agency Agreement, a Registered Note in definitive form may be transferred in whole or in part (in the authorised denominations set out in the applicable Pricing Supplement). In order to effect any such transfer (a) the holder or holders must (i) surrender the Registered Note for registration of the transfer of the Registered Note (or the relevant part of the Registered Note) at the specified office of any Transfer Agent, with the form of transfer thereon duly executed by the holder or holders thereof or his or their attorney or attorneys duly authorised in writing and (ii) complete and deposit such other certifications as may be required by the relevant Transfer Agent and (b) the relevant Transfer Agent must, after due and careful enquiry, be satisfied with the documents of title and the identity of the person making the request. Any such transfer will be subject to such reasonable regulations as the Issuer and the Registrar may from time to time prescribe (the initial such regulations being set out in Schedule 10 to the Agency Agreement). Subject as provided above, the relevant Transfer Agent will, within three business days (being for this purpose a day on which banks are open for business in the city where the specified office of the relevant Transfer Agent is located) of the request (or such longer period as may be required to comply with any applicable fiscal or other laws or regulations), authenticate and deliver, or procure the authentication and delivery of, at its specified office to the transferee or (at the risk of the transferee) send by uninsured mail, to such address as the transferee may request, a new Registered Note in definitive form of a like aggregate nominal amount to the Registered Note (or the relevant part of the Registered Note) transferred. In the case of the transfer of part only of a Registered Note in definitive form, a new Registered Note in definitive form in respect of the balance of the Registered Note not transferred will be so authenticated and delivered or (at the risk of the transferor) sent to the transferor.

### **(c) Registration of transfer upon partial redemption**

In the event of a partial redemption of Notes under Condition 5, the Issuer shall not be required to register the transfer of any Registered Note, or part of a Registered Note, called for partial redemption.

**(d) Costs of registration**

Noteholders will not be required to bear the costs and expenses of effecting any registration of transfer as provided above, except for any costs or expenses of delivery other than by regular uninsured mail and except that the Issuer may require the payment of a sum sufficient to cover any stamp duty, tax or other governmental charge that may be imposed in relation to the registration.

**(e) Transfers of interests in Regulation S Global Notes**

Prior to expiry of the applicable Distribution Compliance Period, transfers by the holder of, or of a beneficial interest in, a Regulation S Global Note to a transferee in the United States or who is a U.S. person will only be made:

- (i) upon receipt by the Registrar of a written certification substantially in the form set out in the Agency Agreement, amended as appropriate (a “Transfer Certificate”), copies of which are available from the specified office of any Transfer Agent, from the transferor of the Note or beneficial interest therein to the effect that such transfer is being made:
  - (A) to a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or
  - (B) to a person who is an Institutional Accredited Investor, together with, in the case of (ii), a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an “IAI Investment Letter”); or
- (ii) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable securities laws of any State of the United States, and, in each case, in accordance with any applicable securities laws of any State of the United States or any other jurisdiction. In the case of (i)(A) above, such transferee may take delivery through a Legended Note in global or definitive form and, in the case of (i)(B) above, such transferee may take delivery only through a Legended Note in definitive form. After expiry of the applicable Distribution Compliance Period (I) beneficial interests in Regulation S Global Notes registered in the name of a nominee for DTC may be held through DTC directly, by a participant in DTC, or indirectly through a participant in DTC and (II) such certification requirements will no longer apply to such transfers.

**(f) Transfers of interests in Legended Notes**

Transfers of Legended Notes or beneficial interests therein may be made:

- (i) to a transferee who takes delivery of such interest through a Regulation S Global Note, upon receipt by the Registrar of a duly completed Transfer Certificate from the transferor to the effect that such transfer is being made in accordance with Regulation S and that in the case of a Regulation S Global Note registered in the name of a nominee for DTC, if such transfer is being made prior to expiry of the applicable Distribution Compliance Period, the interests in the Notes being transferred will be held immediately thereafter through Euroclear and/or Clearstream, Luxembourg; or
- (ii) to a transferee who takes delivery of such interest through a Legended Note:
  - (A) where the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, without certification; or

- (B) where the transferee is an Institutional Accredited Investor, subject to delivery to the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, together with a duly executed IAI Investment Letter from the relevant transferee; or
- (iii) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable securities laws of any State of the United States, and, in each case, in accordance with any applicable securities laws of any State of the United States or any other jurisdiction.

Notes transferred by Institutional Accredited Investors to QIBs pursuant to Rule 144A or outside the United States pursuant to Regulation S will be eligible to be held by such QIBs or non-U.S. investors through DTC, the CMU Service, Euroclear or Clearstream, Luxembourg, as appropriate, and the Registrar will arrange for any Notes which are the subject of such a transfer to be represented by the appropriate Registered Global Note, where applicable.

Upon the transfer, exchange or replacement of Legended Notes, or upon specific request for removal of the Legend, the Registrar shall deliver only Legended Notes or refuse to remove the Legend, as the case may be, unless there is delivered to the Issuer such satisfactory evidence as may reasonably be required by the Issuer, which may include an opinion of U.S. counsel, that neither the Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act.

**(g) Exchanges and transfers of Registered Notes generally**

Holders of Registered Notes in definitive form, other than Institutional Accredited Investors, may exchange such Notes for interests in a Registered Global Note of the same type at any time.

**(h) Definitions**

In this Condition, the following expressions shall have the following meanings:

“Distribution Compliance Period” means the period that ends 40 days after the completion of the distribution of each Tranche of Notes, as certified by the relevant Dealer (in the case of a non-syndicated issue) or the relevant Lead Manager (in the case of a syndicated issue);

“Institutional Accredited Investor” means “accredited investors” (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions;

“Legended Note” means Registered Notes in definitive form that are issued to Institutional Accredited Investors and Registered Notes (whether in definitive form or represented by a Registered Global Note) sold in private transactions to QIBs in accordance with the requirements of Rule 144A which bear a legend specifying certain restrictions on transfer (a Legend);

“QIB” means a qualified institutional buyer within the meaning of Rule 144A;

“Regulation S” means Regulation S under the Securities Act;

“Regulation S Global Note” means a Registered Global Note representing Notes sold outside the United States in reliance on Regulation S;

“Rule 144A” means Rule 144A under the Securities Act;

“Rule 144A Global Note” means a Registered Global Note representing Notes sold in the United States or to QIBs; and

“Securities Act” means the United States Securities Act of 1933, as amended.

### **3 Status and Negative Pledge**

#### **(a) Status**

The Notes and the relative Coupons and Receipts are the direct, unconditional, unsubordinated and (subject to the provisions of Condition 3(b)) unsecured general obligations of the Issuer and will rank pari passu among themselves, without any preference one over the other by reason of priority of date of issue or currency of payment or otherwise, and at least equally with all other outstanding unsecured and unsubordinated obligations of the Issuer subject, in the event of insolvency, to laws of general applicability relating to or affecting creditors' rights.

#### **(b) Negative Pledge**

So long as any of the Notes of this Series remains outstanding (as defined in the Agency Agreement), the Issuer will not create or permit to subsist any Encumbrance (as defined below) upon the whole or any part of its assets, present or future, to secure any indebtedness, or to secure any guarantee of indebtedness, unless the Notes, Receipts and Coupons of this Series shall be secured equally and rateably therewith, except that the Issuer may create or permit to arise or subsist:

- (i) any Encumbrance over promissory notes or other commercial paper discounted or otherwise provided as security to or issued by the Issuer where such Encumbrance is created in favour of The Bank of Korea in the normal operation of its discount facilities or its facilities for the funding of loans by the Issuer to customers of the Issuer; or
- (ii) any Encumbrance over any immovable property owned by the Issuer as security for the repayment by the Issuer to a tenant of that property of any security deposit paid by such tenant to the Issuer upon taking a tenancy or lease of that property; or
- (iii) any Encumbrance or any other agreement or arrangement having a similar effect arising in connection with a sale and repurchase transaction entered under TBMA/ISMA Global Master Repurchase Agreement or any other substantially similar repurchase agreement or arrangement of such kind entered into, or created, or arising in the ordinary course of business of the Issuer, provided that the amount of such transaction (when aggregated with the amount of any other such transactions) does not exceed 15 per cent. of the borrowing liabilities of the Issuer as set out in the latest audited non-consolidated balance sheet of the Issuer; or
- (iv) any Encumbrance over any loan or other indebtedness (the “Loan Asset”) denominated in one currency (the “Denominated Currency”) owed by a party (together with its subsidiaries, and related entities, the “Secured Counterparty”) to the Issuer, which is granted in favour of the Secured Counterparty in connection with (a) a loan or other indebtedness denominated in a currency other than the Denominated Currency of the Issuer or any of its subsidiaries or related entities owed to the Secured Counterparty (the “Reciprocal Loan”) and (b) the Issuer or any of its subsidiaries or related entities having been granted the benefit of an Encumbrance over the Reciprocal Loan by the Secured Counterparty, and which transaction or arrangement described herein is commonly regarded as a parallel loan or back-to-back loan, provided that such transaction or arrangement is entered into in the ordinary course of business of the Issuer and the aggregate outstanding principal amount of the Loan Assets of the Issuer which are subject to such Encumbrance does not exceed 5 per cent. of the borrowing liabilities of the Issuer as set out in the latest audited non-consolidated balance sheet of the Issuer; or

- (v) any statutory liens arising in the ordinary course of the Issuer's business and not in connection with the borrowing or raising of money; or
- (vi) any Encumbrance arising or preference given under Korean law, applicable generally to corporations established under Korean law, by virtue of a failure by the Issuer to meet an obligation, provided that such Encumbrance does not subsist for more than 30 days; or
- (vii) any Encumbrance over any asset purchased by the Issuer (or documents of title thereto) or arising in connection with improvements to any asset of the Issuer as security for the unpaid balance of the purchase price thereof or costs of improvement thereto.

In these Terms and Conditions:

"Encumbrance" means any mortgage, charge, encumbrance, pledge or other security interest.

## 4 Interest

### (a) Interest on Fixed Rate Notes

- (I) In the case of Fixed Rate Notes where Condition 4(a)(I) is specified as being applicable in the applicable Pricing Supplement, the following provisions will apply instead of Condition 4(a)(II):

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum equal to the Rate(s) of Interest. Interest will be payable in arrear on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

If the Notes are in definitive form, except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on (but excluding) such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

In these Conditions, "Fixed Interest Period" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date.

Except in the case of Notes in definitive form where a Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

- (A) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or
- (B) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such subunit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in definitive form is a multiple of the Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount

and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination without any further rounding.

In these Terms and Conditions:

“Day Count Fraction” means, in respect of the calculation of an amount of interest in accordance with this Condition 4(a):

- (i) if “Actual/Actual (ICMA)” is specified in the applicable Pricing Supplement:
  - (a) in the case of Notes where the number of days in the relevant period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (the “Accrual Period”) is equal to or shorter than the Determination Period during which the Accrual Period ends, the number of days in such Accrual Period divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; or
  - (b) in the case of Notes where the Accrual Period is longer than the Determination Period during which the Accrual Period ends, the sum of:
    - (1) the number of days in such Accrual Period falling in the Determination Period in which the Accrual Period begins divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; and
    - (2) the number of days in such Accrual Period falling in the next Determination Period divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year;
- (ii) if “30/360” is specified in the applicable Pricing Supplement, the number of days in the period from and including the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to but excluding the relevant payment date (such number of days being calculated on the basis of 12 30-day months) divided by 360;
- (iii) if “Actual/365 (Fixed)” is specified in the applicable Pricing Supplement, the actual number of days in the Fixed Interest Period divided by 365; and
- (iv) if “Actual/360 (Fixed)” is specified in the applicable Pricing Supplement, the actual number of days in the Fixed Interest Period divided by 360.

In these Terms and Conditions:

“Determination Period” means each period from (and including) a Determination Date to (but excluding) the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after such date); and

“sub-unit” means, with respect to any currency other than euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, with respect to euro, means one cent.

- (II) In the case of Fixed Rate Notes where Condition 4(a)(II) is specified as being applicable in the applicable Pricing Supplement, the following provisions will apply instead of Condition 4(a)(I):

Each Fixed Rate Note bears interest from (and including) the Interest Commencement Date at the rate(s) per annum equal to the Rate(s) of Interest. If any Interest Payment Date would otherwise fall on a day which is not a business day (as defined below), it shall be postponed to the next day which is a business day unless it would thereby fall into the next calendar month in which event it shall be brought forward to the immediately preceding business day. Interest will be payable in arrear on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

If the Notes are in definitive form, except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on (but excluding) such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

As used in this Condition 4(a)(II), “Fixed Interest Period” means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date.

The Calculation Agent will, as soon as practicable after 11.00 a.m. (Hong Kong time) on the second business day before the beginning of each Fixed Interest Period (each an “Interest Determination Date”), calculate the amount of interest payable per Calculation Amount for the relevant Fixed Interest Period. The determination of the amount of interest payable per Calculation Amount by the Calculation Agent shall (in the absence of manifest error and after confirmation by the Issuer) be final and binding upon all parties.

The Calculation Agent will cause the amount of interest payable per Calculation Amount for each Fixed Interest Period and the relevant Interest Payment Date to be notified to each of the Paying Agents and to be notified to Noteholders as soon as possible after their determination but in no event later than the fourth business day thereafter. The amount of interest payable per Calculation Amount and Interest Payment Date so published may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period. If the Notes become due and payable under Condition 10, the accrued interest per Calculation Amount shall nevertheless continue to be calculated as previously by the Calculation Agent in accordance with this Condition 4(a)(II) but no publication of the amount of interest payable per Calculation Amount so calculated need be made.

Except in the case of Notes in definitive form where an applicable Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

- (i) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or
- (ii) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the actual number of days in the Fixed Interest Period concerned divided by 365, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in

definitive form is a multiple of the Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination, without any further rounding.

In this Condition 4(a)(II):

“business day” means a day (other than a Saturday, Sunday or public holiday) upon which commercial banks are generally open for business and settlement of Hong Kong dollar and Renminbi payments in Hong Kong and the Business Centre specified in the applicable Pricing Supplement, respectively; and

“sub-unit” means, with respect to Hong Kong dollars and Renminbi, the lowest amount of such currency that is available as legal tender in Hong Kong and the PRC, respectively.

**(b) Interest on Floating Rate Notes and Index Linked Interest Notes**

*(i) Interest Payment Dates*

Each Floating Rate Note and Index Linked Interest Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date and such interest will be payable in arrear on either:

- (A) the Specified Interest Payment Date(s) in each year specified in the applicable Pricing Supplement; or
- (B) if no Specified Interest Payment Date(s) is/are specified in the applicable Pricing Supplement, each date (each such date, together with each Specified Interest Payment Date an “Interest Payment Date”) which falls the number of months or other period specified as the Specified Period in the applicable Pricing Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

Such interest will be payable in respect of each Interest Period (which expression shall, in these Terms and Conditions, mean the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date).

If a Business Day Convention is specified in the applicable Pricing Supplement and (x) if there is no numerically corresponding day on the calendar month in which an Interest Payment Date should occur or (y) if any Interest Payment Date would otherwise fall on a day which is not a Business Day, then, if the Business Day Convention specified is:

- (1) in any case where Specified Periods are specified in accordance with Condition 4(b)(i)(B) above, the Floating Rate Convention, such Interest Payment Date (i) in the case of (x) above, shall be the last day that is a Business Day in the relevant month and the provisions of (B) below shall apply *mutatis mutandis* or (ii) in the case of (y) above, shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event (A) such Interest Payment Date shall be brought forward to the immediately preceding Business Day and (B) each subsequent Interest Payment Date shall be the last Business Day in the month which falls the Specified Period after the preceding applicable Interest Payment Date occurred; or
- (2) the Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day; or

- (3) the Modified Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event such Interest Payment Date shall be brought forward to the immediately preceding Business Day; or
- (4) the Preceding Business Day Convention, such Interest Payment Date shall be brought forward to the immediately preceding Business Day.

In these Terms and Conditions, “Business Day” means a day which is both:

- (A) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in (1) London or (2) if the location of the office of the Fiscal Agent as specified in the applicable Pricing Supplement is not London, Hong Kong and any Additional Business Centre specified in the applicable Pricing Supplement; and
- (B) either (1) in relation to any sum payable in a Specified Currency other than euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial centre of the country of the relevant Specified Currency (which if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi shall be Sydney, Auckland or Hong Kong, respectively) or (2) in relation to any sum payable in euro, a day on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET2) System (the “TARGET2 System”) is open.

(ii) *Rate of Interest*

The Rate of Interest payable from time to time in respect of Floating Rate Notes and Index Linked Interest Notes will be determined in the manner specified in the applicable Pricing Supplement.

(A) ISDA Determination for Floating Rate Notes

Where ISDA Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any). For the purposes of this subparagraph (A), “ISDA Rate” for an Interest Period means a rate equal to the Floating Rate that would be determined by the Fiscal Agent under an interest rate swap transaction if the Fiscal Agent were acting as Calculation Agent for that swap transaction under the terms of an agreement incorporating the 2006 ISDA definitions as published by the International Swaps and Derivatives Association, Inc. (the “ISDA definitions”) and under which;

- (1) the Floating Rate Option is as specified in the applicable Pricing Supplement;
- (2) the Designated Maturity is a period specified in the applicable Pricing Supplement; and
- (3) the relevant Reset Date is as specified in the applicable Pricing Supplement.

For the purposes of this sub-paragraph (A), “Floating Rate”, “Calculation Agent”, “Floating Rate Option”, “Designated Maturity”, “Euro-zone” and “Reset Date” have the meanings given to those terms in the ISDA definitions.

(B) Screen Rate Determination for Floating Rate Notes

- (1) Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will, subject as provided below, be either;
    - (i) the offered quotation; or
    - (ii) the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the offered quotations,
 

(expressed as a percentage rate per annum) for the Reference Rate which appears or appear, as the case may be, on the Relevant Screen Page (or any other such page as may replace that page on the relevant service, or such other service as may be nominated as the information vendor, for the purpose of displaying comparable rates) (the “Relevant Screen Page Rate”) as at 11.00 a.m. (in the Relevant Financial Centre time) (the “Specified Time”) on the Interest Determination Date in question plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any), all as determined by the Fiscal Agent. If five or more of such offered quotations are available on the Relevant Screen Page, the highest (or, if there is more than one such highest quotation, one only of such quotations) and the lowest (or, if there is more than one such lowest quotation, one only of such quotations) shall be disregarded by the Fiscal Agent for the purpose of determining the arithmetic mean (rounded as provided above) of such offered quotations.
  - (2) The Agency Agreement contains provisions for determining the Rate of Interest in the event that the Relevant Screen Page is not available or if, in the case of (i) above, no such offered quotation appears or, in the case of (ii) above, fewer than three such offered quotations appear, in each case as at the time specified in the preceding paragraph; provided, however, that Condition 4(f) shall apply if Benchmark Transition Event is specified in the applicable Pricing Supplement and a Benchmark Transition Event (as defined in Condition 4(f)) has occurred.
- (C) Screen Rate Determination for Floating Rate Notes where the Reference Rate is specified as being SOFR Benchmark

Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined where the Reference Rate is SOFR Benchmark, the Rate of Interest for each Interest Period will, subject as provided below, be equal to the relevant SOFR Benchmark plus or minus the Margin (if any), all as determined by the Calculation Agent on the relevant Interest Determination Date.

The “SOFR Benchmark” will be determined based on Compounded Daily SOFR or SOFR Index, as follows (subject in each case to Condition 4(g) as further specified hereon):

- (1) If Compounded Daily SOFR (“**Compounded Daily SOFR**”) is specified in the applicable Pricing Supplement as the manner in which the SOFR Benchmark will be determined, the SOFR Benchmark for each Interest Period shall be equal to the compounded average of daily SOFR reference rates for each day during the relevant Interest Period (where SOFR Lag is specified in the applicable Pricing Supplement to determine Compounded Daily SOFR) or the SOFR Observation

Period (where SOFR Observation Shift is specified in the applicable Pricing Supplement to determine Compounded Daily SOFR).

Compounded Daily SOFR shall be calculated by the Calculation Agent in accordance with one of the formulas referenced below depending upon which is specified in the applicable Pricing Supplement:

(A) SOFR Lag:

$$\left( \prod_{i=1}^{d_o} \left( 1 + \frac{SOFR_{i-xUSBD} \times n_i}{360} \right) - 1 \right) \times \frac{360}{d}$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

“SOFR<sub>i-xUSBD</sub>” for any U.S. Government Securities Business Day “i” in the relevant Interest Period, is equal to the SOFR reference rate for the U.S. Government Securities Business Day falling the number of Lookback Days prior to that U.S. Government Securities Business Day “i”;

“Lookback Days” means such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement, which shall, unless otherwise agreed with the Calculation Agent (or such other person specified in the applicable Final Terms as the party responsible for calculating the Rate of Interest), be no less than five U.S. Government Securities Business Days;

“d” means the number of calendar days in the relevant Interest Period;

“d<sub>o</sub>” for any Interest Period, means the number of U.S. Government Securities Business Days in the relevant Interest Period;

“i” means a series of whole numbers ascending from one to d<sub>o</sub>, representing each relevant U.S. Government Securities Business Day from (and including) the first U.S. Government Securities Business Day in the relevant Interest Period (each a “U.S. Government Securities Business Day “i””); and

“n<sub>i</sub>” for any U.S. Government Securities Business Day “i” in the relevant Interest Period, means the number of calendar days from (and including) such U.S. Government Securities Business Day “i” up to (but excluding) the following U.S. Government Securities Business Day for which SOFR<sub>i-xUSBD</sub> applies.

(B) SOFR Observation Shift:

$$\left( \prod_{i=1}^{d_o} \left( 1 + \frac{SOFR_i \times n_i}{360} \right) - 1 \right) \times \frac{360}{d}$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

“SOFR<sub>i</sub>” for any U.S. Government Securities Business Day “i” in the relevant SOFR Observation Period, is equal to the SOFR reference rate for that U.S. Government Securities Business Day “i”;

“SOFR Observation Period” means, in respect of an Interest Period, the period from (and including) the date falling the number of SOFR Observation Shift Days prior to the first day of such Interest Period to (but excluding) the date falling the number of SOFR Observation Shift Days prior to the Interest Payment Date for such Interest Period, which shall be a minimum of five U.S. Government Securities Business Days, unless otherwise agreed with the Calculation Agent;

“SOFR Observation Shift Days” means the number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement, which shall not be less than three U.S. Government Securities Business Days at any time and shall, unless otherwise agreed with the Calculation Agent (or such other person specified in the applicable Final Terms as the party responsible for calculating the Rate of Interest), be no less than five U.S. Government Securities Business Days;

“d” means the number of calendar days in the relevant SOFR Observation Period;

“d<sub>0</sub>” for any SOFR Observation Period, means the number of U.S. Government Securities Business Days in the relevant SOFR Observation Period;

“i” means a series of whole numbers ascending from one to do, representing each U.S. Government Securities Business Day from (and including) the first U.S. Government Securities Business Day in the relevant SOFR Observation Period (each a “U.S. Government Securities Business Day “i””); and

“n<sub>i</sub>” for any U.S. Government Securities Business Day “i” in the relevant SOFR Observation Period, means the number of calendar days from (and including) such U.S. Government Securities Business Day “i” up to (but excluding) the following U.S. Government Securities Business Day for which SOFR<sub>i</sub> applies.

The following defined terms shall have the meanings set out below for purpose of this 4(b)(ii)(C)(1):

“Bloomberg Screen SOFRRATE Page” means the Bloomberg screen designated “SOFRRATE” or any successor page or service;

“Reuters Page USDSOFR=” means the Reuters page designated “USDSOFR=” or any successor page or service;

“SOFR” means, in respect of a U.S. Government Securities Business Day, the reference rate determined by the Calculation Agent in accordance with the following provision:

- (i) the Secured Overnight Financing Rate published at the SOFR Determination Time as such reference rate is reported on the Bloomberg Screen SOFRRATE Page; the Secured Overnight Financing Rate published at the SOFR Determination Time as such reference rate is reported on the Reuters Page USDSOFR=; or the Secured Overnight Financing Rate published at the SOFR Determination Time on the SOFR Administrator’s Website;
- (ii) if the reference rate specified in (i) above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have not occurred, the SOFR reference rate shall be the reference rate published on the SOFR Administrator’s Website for the first preceding U.S. Government Securities Business Day for which SOFR was published on the SOFR Administrator’s Website; or
- (iii) if the reference rate specified in (i) above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have occurred, the provisions set forth in Condition 4(g) shall apply as specified in the applicable Pricing Supplement;

“**SOFR Determination Time**” means approximately 3:00 p.m. (New York City time) on the immediately following U.S. Government Securities Business Day.

- (2) If SOFR Index (“SOFR Index”) is specified in the applicable Pricing Supplement, the SOFR Benchmark for each Interest Period shall be equal to the compounded average of daily SOFR reference rates for each day during the relevant SOFR Observation Period as calculated by the Calculation Agent as follows:

$$\left( \frac{SOFR\ Index_{End}}{SOFR\ Index_{Start}} - 1 \right) \times \left( \frac{360}{d_c} \right)$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

“SOFR Index” means, in respect of a U.S. Government Securities Business Day, the SOFR Index value as published on the SOFR Administrator’s Website at the SOFR Index Determination Time on such U.S. Government Securities Business Day, *provided that*:

- (A) if the value specified above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have not occurred, the “SOFR Index” shall be calculated on any Interest Determination Date with respect to an Interest Period, in accordance with

the Compounded Daily SOFR formula described above in Condition 4(b)(ii)(C)(1)(B) “SOFR Observation Shift, and the term “SOFR Observation Shift Days” shall mean five U.S. Government Securities Business Days; or

- (B) if the value specified above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have occurred, the provisions set forth in Condition 4(g) shall apply as specified in the applicable Pricing Supplement;

“SOFR Index<sub>End</sub>” means, in respect of an Interest Period, the SOFR Index value on the date that is the number of U.S. Government Securities Business Days specified in the applicable Pricing Supplement prior to the Interest Payment Date for such Interest Period (or in the final Interest Period, the Maturity Date);

“SOFR Index<sub>Start</sub>” means, in respect of an Interest Period, the SOFR Index value on the date that is the number of U.S. Government Securities Business Days specified in the applicable Pricing Supplement prior to the first day of such Interest Period;

“SOFR Index Determination Time” means, in respect of a U.S. Government Securities Business Day, approximately 3:00 p.m. (New York City time) on such U.S. Government Securities Business Day;

“SOFR Observation Period” means, in respect of an Interest Period, the period from (and including) the date falling the number of SOFR Observation Shift Days prior to the first day of such Interest Period to (but excluding) the date falling the number of SOFR Observation Shift Days prior to the Interest Payment Date for such Interest Period, which shall be a minimum of five U.S. Government Securities Business Days, unless otherwise agreed with the Calculation Agent;

“SOFR Observation Shift Days” means the number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement, which shall not be less than three U.S. Government Securities Business Days at any time and shall, unless otherwise agreed with the Calculation Agent (or such other person specified in the applicable Final Terms as the party responsible for calculating the Rate of Interest), be no less than five U.S. Government Securities Business Days; and

“d<sub>c</sub>” means the number of calendar days in the applicable SOFR Observation Period.

The following defined terms shall have the meanings set out below for purpose of this Condition 4(b)(ii)(C):

“Interest Determination Date” means, with respect to a Rate of Interest and Interest Period, the date specified as such in the applicable Pricing Supplement or, if none is so specified, the second U.S. Government Securities Business Day prior to the last day of each Interest Period;

“SOFR Administrator’s Website” means the website of the Federal Reserve Bank of New York, or any successor source;

“SOFR Benchmark Replacement Date” means the date of occurrence of a Benchmark Transition Event with respect to the then-current SOFR Benchmark;

“SOFR Benchmark Transition Event” means the occurrence of a Benchmark Transition Event with respect to the then-current SOFR Benchmark; and

“U.S. Government Securities Business Day” means any day except for a Saturday, a Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

(iii) Minimum Rate of Interest and/or Maximum Rate of Interest

If the applicable Pricing Supplement specifies a Minimum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is less than such Minimum Rate of Interest, the Rate of Interest for such Interest Period shall be such Minimum Rate of Interest.

If the applicable Pricing Supplement specifies a Maximum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is greater than such Maximum Rate of Interest, the Rate of Interest for such Interest Period shall be such Maximum Rate of Interest.

Whether or not a Minimum Rate of Interest or Maximum Rate of Interest is specified in the relevant Pricing Supplement, in no event shall the Rate of Interest (including any applicable Margin) be less than zero.

(iv) *Determination of Rate of Interest and calculation of Interest Amounts*

The Fiscal Agent, in the case of Floating Rate Notes, and the Calculation Agent, in the case of Index Linked Interest Notes, will at or as soon as practicable after each time at which the Rate of Interest is to be determined, determine the Rate of Interest for the relevant Interest Period. In the case of Index Linked Interest Notes, the Calculation Agent will notify the Fiscal Agent of the Rate of Interest for the relevant Interest Period as soon as practicable after calculating the same.

The Fiscal Agent will calculate the amount of interest (the “Interest Amount”) payable on the Floating Rate Notes or Index Linked Interest Notes for the relevant Interest Period by applying the Rate of Interest to:

- (A) in the case of Floating Rate Notes or Index Linked Interest Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or
- (B) in the case of Floating Rate Notes or Index Linked Interest Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such subunit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Floating Rate Note or an Index Linked Interest Note in definitive form is a multiple of the Calculation Amount, the Interest Amount payable in respect of such Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination without any further rounding.

In these Terms and Conditions,

“Day Count Fraction” means, in respect of the calculation of an amount of interest in accordance with this Condition 4(b):

- (i) If “Actual/Actual (ISDA)” or “Actual/Actual” is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 (or, if any portion of that Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);
- (ii) if “Actual/365 (Fixed)” is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365;
- (iii) if “Actual/365 (Sterling)” is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 or, in the case of an Interest Payment Date falling in a leap year, 366;
- (iv) if “Actual/360” is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 360;
- (v) if “30/360” “360/360” or “Bond Basis” is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

$Y_1$  is the year, expressed as a number, in which the first day of the Interest Period falls;

$Y_2$  is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$M_1$  is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

$M_2$  is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$D_1$  is the first calendar day, expressed as a number, of the Interest Period, unless such number is 31, in which case  $D_1$  will be 30; and

$D_2$  is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and  $D_1$  is greater than 29, in which case  $D_2$  will be 30;

- (vi) if “30E/360” or Eurobond Basis” is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

$Y_1$  is the year, expressed as a number, in which the first day of the Interest Period falls;

$Y_2$  is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$M_1$  is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

$M_2$  is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$D_1$  is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case  $D_1$  will be 30; and

$D_2$  is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 in which case  $D_2$  will be 30;

- (vii) if “30E/360 (ISDA)” is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

$Y_1$  is the year, expressed as a number, in which the first day of the Interest Period falls;

$Y_2$  is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$M_1$  is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

$M_2$  is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

$D_1$  is the first calendar day, expressed as a number, of the Interest Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case  $D_1$  will be 30; and

$D_2$  is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless (i) that day is the last day of February but not the Maturity Date or (ii) such number would be 31 and  $D_2$  will be 30.

- (v) *Notification of Rate of Interest and Interest Amounts*

The Fiscal Agent will cause the Rate of Interest and each Interest Amount for each Interest Period and the relevant Interest Payment Date to be notified to the Issuer and any stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and notice thereof to be published in accordance with Condition 12 as soon as possible after their determination but in no event later than the fourth Business Day thereafter. Each Interest Amount and Interest Payment Date so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without prior notice in the event of an extension or shortening of the Interest Period. Any such amendment will be promptly notified to each stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to the Noteholders in accordance with Condition 12. For the purposes of this paragraph, the expression “Business Day” means a day (other than a Saturday or

a Sunday) on which banks and foreign exchange markets are open for business in London or, if the Specified Currency is Renminbi, Hong Kong.

(vi) *Certificates to be final*

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 4, whether by the Fiscal Agent or, if applicable, the Calculation Agent, shall (in the absence of wilful default, bad faith or manifest error) be binding on the Issuer, the Fiscal Agent, the Calculation Agent (if applicable), the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability to the Issuer, the Noteholders, the Receiptholders or the Couponholders shall attach to the Fiscal Agent or the Calculation Agent (if applicable) in connection with the exercise or non-exercise by it of its powers, duties and discretions pursuant to such provisions.

**(c) Interest on Dual Currency Interest Notes**

The rate or amount of interest payable in respect of Dual Currency Interest Notes shall be determined in the manner specified in the applicable Pricing Supplement.

**(d) Interest on Partly Paid Notes**

In the case of Partly Paid Notes (other than Partly Paid Notes which are Zero Coupon Notes), interest will accrue as aforesaid on the paid-up nominal amount of such Notes and otherwise as specified in the applicable Pricing Supplement.

**(e) Accrual of interest**

Each Note (or in the case of the redemption of part only of a Note, that part only of such Note) will cease to bear interest (if any) from the date for its redemption unless, upon due presentation thereof, payment of principal is improperly withheld or refused. In such event, interest will continue to accrue until whichever is the earlier of:

- (1) the date on which all amounts due in respect of such Note have been paid; and
- (2) five days after the date on which the full amount of the moneys payable in respect of such Note has been received by the Fiscal Agent or the Registrar, as the case may be, and notice to that effect has been given to the Noteholders in accordance with Condition 12.

**(f) Benchmark Discontinuation (General)**

(i) *Independent Adviser:*

If a Benchmark Transition Event occurs in relation to an Original Reference Rate when any Rate of Interest (or any component part thereof) remains to be determined by reference to such Original Reference Rate the Issuer shall use its reasonable endeavours to appoint an Independent Adviser, as soon as reasonably practicable, to determine a Successor Rate, failing which an Alternative Rate (in accordance with Condition 4(f)(ii)) and, in either case, an Adjustment Spread and any Benchmark Amendments (in accordance with 4(f)(iv)). In making such determination, the Independent Adviser appointed pursuant to this Condition 4(f) shall act in good faith and in a commercially reasonable manner as an expert. In the absence of bad faith or fraud, the Independent Adviser shall have no liability whatsoever to the Issuer, the Fiscal Agent, the Paying Agents, or the Noteholders for any determination made by it, pursuant to this Condition 4(f).

If (i) the Issuer is unable to appoint an Independent Adviser; or (ii) the Independent Adviser appointed by it fails to determine a Successor Rate or, failing which, an Alternative Rate in accordance with this Condition 4(f)(i) prior to the date which is 10 business days prior to the relevant Interest Determination Date, the Rate of Interest applicable to the next succeeding Interest Period shall be equal to the Rate of Interest last determined in relation to Floating Rate Notes in respect of the immediately preceding Interest Period. If there has not been a first Interest Payment Date, the Rate of Interest shall be the initial Rate of Interest / determined using the Original Reference Rate last displayed on the relevant Screen Page prior to the relevant Interest Determination Date. Where a different Margin or Maximum or Minimum Rate of Interest is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin or Maximum or Minimum Rate of Interest relating to the relevant Interest Period shall be substituted in place of the Margin or Maximum or Minimum Rate of Interest relating to that last preceding Interest Period. For the avoidance of doubt, this paragraph shall apply to the relevant next succeeding Interest Period only and any subsequent Interest Periods are subject to the subsequent operation of, and to adjustment as provided in, the first paragraph of this Condition 4(f)(i).

(ii) *Successor Rate or Alternative Rate:*

If the Independent Adviser, determines that:

- a. there is a Successor Rate, then such Successor Rate and the applicable Adjustment Spread shall subsequently be used in place of the Original Reference Rate to determine the Rate of Interest (or the relevant component part thereof) for all future payments of interest on Floating Rate Notes (subject to the operation of this Condition 4(f)); or
- b. there is no Successor Rate but that there is an Alternative Rate, then such Alternative Rate and the applicable Adjustment Spread shall subsequently be used in place of the Original Reference Rate to determine the Rate of Interest (or the relevant component part thereof) for all future payments of interest on Floating Rate Notes (subject to the operation of this Condition 4(f)).

(iii) *Adjustment Spread*

The Adjustment Spread (or the formula or methodology for determining the Adjustment Spread) shall be applied to the Successor Rate or the Alternative Rate (as the case may be). If the Independent Adviser is unable to determine the quantum of, or a formula or methodology for determining, such Adjustment Spread, then the Successor Rate or Alternative Rate (as applicable) will apply without an Adjustment Spread.

(iv) *Benchmark Amendments:*

If any Successor Rate or Alternative Rate and, in either case, the applicable Adjustment Spread is determined in accordance with this Condition 4(f) and the Independent Adviser, determines (i) that amendments to these Conditions and/or the Agency Agreement are necessary to ensure the proper operation of such Successor Rate or Alternative Rate and/or (in either case) the applicable Adjustment Spread (such amendments, the “Benchmark Amendments”) and (ii) the terms of the Benchmark Amendments, then the Issuer shall, subject to giving notice thereof in accordance with Condition 4(f)(v), without any requirement for the consent or approval of Noteholders, vary

these Conditions and/or the Agency Agreement to give effect to such Benchmark Amendments with effect from the date specified in such notice.

Notwithstanding any other provision of this Condition 4(f), the Calculation Agent or any Paying Agent is not obliged to concur with the Issuer or the Independent Adviser in respect of any changes or amendments as contemplated under this Condition 4(f) to which, in the sole opinion of the Calculation Agent or the relevant Paying Agent, as the case may be, would impose more onerous obligations upon it or expose it to any additional duties, responsibilities or liabilities or reduce or amend the protective provisions afforded to the Calculation Agent or the relevant Paying Agent (as applicable) in the Agency Agreement and/or these Conditions.

In connection with any such variation in accordance with this Condition 4(f)(iv), the Issuer shall comply with the rules of any stock exchange on which the Floating Rate Notes are for the time being listed or admitted to trading.

(v) *Notices, etc.*

Any Successor Rate, Alternative Rate, Adjustment Spread and the specific terms of any Benchmark Amendments determined under this Condition 4(f) will be notified at least 10 business days prior to the relevant Interest Determination Date by the Issuer to the Fiscal Agent, the Calculation Agent, the Paying Agents and, in accordance with Condition 12, the Noteholders. Such notice shall be irrevocable and shall specify the effective date of the Benchmark Amendments, if any.

No later than notifying the Noteholders of the same, the Issuer shall deliver to the Fiscal Agent, the Calculation Agent and the Paying Agents a certificate signed by two directors of the Issuer:

- a. confirming (i) that a Benchmark Transition Event has occurred, (ii) the Successor Rate or, as the case may be, the Alternative Rate, (iii) the applicable Adjustment Spread and (iv) the specific terms of the Benchmark Amendments (if any), in each case as determined in accordance with the provisions of this Condition 4(f); and
- b. certifying that the Benchmark Amendments (if any) are necessary to ensure the proper operation of such Successor Rate or Alternative Rate and (in either case) the applicable Adjustment Spread.

No later than notifying the Noteholders of the same, the Issuer shall deliver to the Fiscal Agent, the Calculation Agent and the Paying Agents a certificate signed by two directors of the Issuer:

Each of the Fiscal Agent, the Calculation Agent and the Paying Agents shall be entitled to rely on such certificate (without liability to any person) as sufficient evidence thereof. The Successor Rate or Alternative Rate and the Adjustment Spread and the Benchmark Amendments (if any) specified in such certificate will (in the absence of manifest error or bad faith in the determination of the Successor Rate or Alternative Rate and the Adjustment Spread and the Benchmark Amendments (if any) and without prejudice to the Fiscal Agent's or the Calculation Agent's or the Paying Agents' ability to rely on such certificate as aforesaid) be binding on the Issuer, the Fiscal Agent, the Calculation Agent, the Paying Agents and the Noteholders.

Notwithstanding any other provision of this Condition 4(f), if following the determination of any Successor Rate, Alternative Rate, Adjustment Spread or Benchmark Amendments (if any), in the Calculation Agent's opinion there is any uncertainty between two or more alternative courses of action in making any determination or calculation under this Condition 4(f), the Calculation Agent shall promptly notify the Issuer thereof and the Issuer shall direct the Calculation Agent in

writing as to which alternative course of action to adopt. If the Calculation Agent is not promptly provided with such direction, or is otherwise unable (other than due to its own gross negligence, willful default or fraud) to make such calculation or determination for any reason, it shall notify the Issuer thereof and the Calculation Agent shall be under no obligation to make such calculation or determination and (in the absence of such gross negligence, willful default or fraud) shall not incur any liability for not doing so.

(vi) *Survival of Original Reference Rate*

Without prejudice to the obligations of the Issuer under Condition 4(f)(i), Condition 4(f)(ii), Condition 4(f)(iii) and Condition 4(f)(iv), the Original Reference Rate and the fallback provisions provided for in Condition 4(b)(i) will continue to apply unless and until a Benchmark Transition Event has occurred.

(vii) *Definitions*

As used in this Condition 4(f):

“Adjustment Spread” means either (a) a spread (which may be positive, negative or zero) or (b) a formula or methodology for calculating a spread, in each case to be applied to the Successor Rate or the Alternative Rate (as the case may be) and is the spread, formula or methodology which:

- a. (in the case of a Successor Rate, is formally recommended in relation to the replacement of the Original Reference Rate with the Successor Rate by any Relevant Nominating Body; or (if no such recommendation has been made, or in the case of an Alternative Rate);
- b. the Independent Adviser determines, is customarily applied to the relevant Successor Rate or the Alternative Rate (as the case may be) in international debt capital markets transactions to produce an industry-accepted replacement rate for the Original Reference Rate; or (if the Independent Adviser determines that no such spread is customarily applied);
- c. the Independent Adviser determines is recognised or acknowledged as being the industry standard for over-the-counter derivative transactions which reference the Original Reference Rate, where such rate has been replaced by the Successor Rate or the Alternative Rate (as the case may be).

“Alternative Rate” means an alternative benchmark or screen rate which the Independent Adviser determines in accordance with Condition 4(f)(ii) is customarily applied in international debt capital markets transactions for the purposes of determining rates of interest (or the relevant component part thereof) in the same Specified Currency as the Floating Rate Notes.

“Benchmark Amendments” has the meaning given to it in Condition 4(f)(iv).

“Benchmark Transition Event” means :

- a. the Original Reference Rate ceasing to be published for a period of at least 5 Business Days or ceasing to exist; or
- b. a public statement by the administrator of the Original Reference Rate that it has ceased or that it will cease publishing the Original Reference Rate permanently or indefinitely (in circumstances where no successor administrator has been appointed that will continue publication of the Original Reference Rate); or

- c. a public statement by the supervisor of the administrator of the Original Reference Rate, that the Original Reference Rate has been or will be permanently or indefinitely discontinued; or
- d. a public statement by the supervisor of the administrator of the Original Reference Rate as a consequence of which the Original Reference Rate will be prohibited from being used either generally, or in respect of the Floating Rate Notes; or
- e. the making of a public statement by the supervisor of the administrator of the Original Reference Rate that the Original Reference Rate is or will be (or is or will be deemed by such supervisor to be) no longer representative of its relevant underlying market; or
- f. it has become unlawful for any Paying Agent, the Calculation Agent, the Issuer or other party to calculate any payments due to be made to any Noteholder using the Original Reference Rate;

provided that the Benchmark Transition Event shall be deemed to occur (a) in the case of sub-paragraphs (B) and (C) above, on the date of the cessation of publication of the Original Reference Rate or the discontinuation of the Original Reference Rate, as the case may be, (b) in the case of sub-paragraph (D) above, on the date of the prohibition of use of the Original Reference Rate and (c) in the case of sub-paragraph (E) above, on the date with effect from which the Original Reference Rate will no longer be (or will be deemed by the relevant supervisor to no longer be) representative of its relevant underlying market and which is specified in the relevant public statement, and, in each case, not the date of the relevant public statement.

The occurrence of a Benchmark Transition Event shall be determined by the Issuer and promptly notified to the Fiscal Agent, the Calculation Agent and the Paying Agents. For the avoidance of doubt, neither the Fiscal Agent, the Calculation Agent nor the Paying Agents shall have any responsibility for making such determination.

“Independent Adviser” means an independent financial institution of international repute or an independent financial adviser with appropriate expertise appointed by the Issuer under Condition 4(f)(i).

“Original Reference Rate” means the originally-specified benchmark or screen rate (as applicable) used to determine the Rate of Interest (or any component part thereof) on the Floating Rate Notes.

“Relevant Nominating Body” means, in respect of a benchmark or screen rate (as applicable):

- a. the central bank for the currency to which the benchmark or screen rate (as applicable) relates, or any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable); or
- b. any working group or committee sponsored by, chaired or co-chaired by or constituted at the request of (a) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, (b) any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable), (c) a group of the aforementioned central banks or other supervisory authorities or (d) the Financial Stability Board or any part thereof.

“Successor Rate” means a successor to or replacement of the Original Reference Rate which is formally recommended by any Relevant Nominating Body. In connection with the

implementation of a Benchmark Replacement, the Issuer or its designee will have the right to make Benchmark Replacement Conforming Changes (as defined herein) from time to time.

**(g) Benchmark Discontinuation (SOFR)**

The following provisions shall apply if Benchmark Discontinuation (SOFR) is specified in the applicable Pricing Supplement:

*(i) Benchmark Replacement*

If the Issuer or its designee determines on or prior to the relevant Reference Time that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to the then-current Benchmark, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the Notes in respect of all determinations on such date and for all determinations on all subsequent dates.

*(ii) Benchmark Replacement Conforming Changes*

In connection with the implementation of a Benchmark Replacement, the Issuer or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time. For the avoidance of doubt, any of the Agents shall, at the direction and expense of the Issuer, effect such consequential amendments to the Agency Agreement and these Conditions as may be required to give effect to this Condition 4(g). Noteholders' consent shall not be required in connection with effecting any such changes, including the execution of any documents or any steps to be taken by the Agents (if required). Further, none of the Calculation Agent, the Paying Agents, the Registrars or the Transfer Agents shall be responsible or liable for any determinations, decisions or elections made by the Issuer or its designee with respect to any Benchmark Replacement or any other changes and shall be entitled to rely conclusively on any certifications provided to each of them in this regard.

*(iii) Decisions and Determinations*

Any determination, decision or election that may be made by the Issuer or its designee pursuant to this Condition 4(g), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection (A) will be conclusive and binding absent manifest error, (B) will be made in the sole discretion of the Issuer or its designee, as applicable, and (C) notwithstanding anything to the contrary in the documentation relating to the Notes, shall become effective without consent from the holders of the Notes or any other party.

*(iv) Certain Defined Terms*

As used in this Condition 4(g):

“Benchmark” means, initially, the relevant SOFR Benchmark specified in the applicable Pricing Supplement; provided that if the Issuer or its designee determines on or prior to the Reference Time that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to the relevant SOFR Benchmark (including any daily published component used in the calculation thereof) or the then-current Benchmark, then “Benchmark” means the applicable Benchmark Replacement;

“Benchmark Transition Event” means the occurrence of one or more of the following events with respect to the then-current Benchmark (including any daily published component used in the calculation thereof):

- (A) a public statement or publication of information by or on behalf of the administrator of the Benchmark (or such component) announcing that such administrator has ceased or will cease to provide the Benchmark (or such component), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark (or such component); or
- (B) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark (or such component), the central bank for the currency of the Benchmark (or such component), an insolvency official with jurisdiction over the administrator for the Benchmark (or such component), a resolution authority with jurisdiction over the administrator for the Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark (or such component) has ceased or will cease to provide the Benchmark (or such component) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark (or such component); or
- (C) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative;

“Benchmark Replacement” means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

- (A) the sum of:
  - (1) the alternate reference rate that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark (including any daily published component used in the calculation thereof); and
  - (2) the Benchmark Replacement Adjustment;
- (B) the sum of:
  - (1) the ISDA Fallback Rate; and
  - (2) the Benchmark Replacement Adjustment; or
- (C) the sum of:
  - (1) the alternate reference rate that has been selected by the Issuer or its designee as the replacement for the then-current Benchmark (including any daily published component used in the calculation thereof) giving due consideration to any industry-accepted reference rate as a replacement for the then-current Benchmark (including any

daily published component used in the calculation thereof) for U.S. dollar-denominated Floating Rate Notes at such time; and

- (2) the Benchmark Replacement Adjustment;

“Benchmark Replacement Adjustment” means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

- (A) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;
- (B) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, the ISDA Fallback Adjustment; or
- (C) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark (including any daily published component used in the calculation thereof) with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated Floating Rate Notes at such time;

“Benchmark Replacement Conforming Changes” means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the timing and frequency of determining rates and making payments of interest, rounding of amounts or tenors, and other administrative matters) the Issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the Issuer or its designee determine that no market practice for use of the Benchmark Replacement exists, in such other manner as the Issuer or its designee determines is reasonably necessary);

“Benchmark Replacement Date” means the earliest to occur of the following events with respect to the then-current Benchmark (including any daily published component used in the calculation thereof):

- (A) in the case of sub-paragraph (A) or (B) of the definition of “Benchmark Transition Event”, the later of:
  - (1) the date of the public statement or publication of information referenced therein; and
  - (2) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark (or such component); or
- (B) in the case of sub-paragraph (C) of the definition of “Benchmark Transition Event”, the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination;

“designee” means a designee as selected and separately appointed by the Issuer in writing;

“ISDA Definitions” means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time;

“ISDA Fallback Adjustment” means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark;

“ISDA Fallback Rate” means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark (including any daily published component used in the calculation thereof) for the applicable tenor excluding the applicable ISDA Fallback Adjustment;

“Reference Time” with respect to any determination of the Benchmark means (1) if the Benchmark is the SOFR Benchmark, the SOFR Determination Time (where Compounded Daily SOFR is specified as applicable hereon) or SOFR Index Determination Time (where SOFR Index is specified as applicable hereon), or (2) if the Benchmark is not the SOFR Benchmark, the time determined by the Issuer or its designee after giving effect to the Benchmark Replacement Conforming Changes;

“Relevant Governmental Body” means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto; and

“Unadjusted Benchmark Replacement” means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

## **5 Redemption and Purchase**

### **(a) Redemption at maturity**

Unless previously redeemed or purchased and cancelled as provided below, each Note (including each Index Linked Redemption Note and Dual Currency Redemption Note) will be redeemed at its Final Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement in the Specified Currency on the Maturity Date.

### **(b) Redemption for tax reasons**

All the Notes of this Series, but not some only, may be redeemed at the option of the Issuer, at any time (in the case of Notes other than Floating Rate Notes, Indexed Interest Notes or Dual Currency Interest Notes) or on any Interest Payment Date (in the case of Floating Rate Notes, Index Linked Interest Notes

or Dual Currency Interest Notes), on giving not less than 30 nor more than 60 days' notice in accordance with Condition 12, to the holders of the Notes of this Series (which notice shall be irrevocable), at their Early Redemption Amount referred to in Condition 5(f), together (if appropriate) with interest (if any) accrued to the date fixed for redemption, if:

- (i) on the occasion of the next payment due under the Notes the Issuer has or will become obliged to pay additional amounts as provided or referred to in Condition 7 as a result of any change in, or amendment to, the laws or regulations of a Tax Jurisdiction (as defined in Condition 7), or any change in the application or official interpretation of such laws or regulations, which change or amendment becomes effective on or after the Issue Date of the first Tranche of Notes of this Series; and
- (ii) such obligation cannot be avoided by the Issuer taking reasonable measures available to it, provided that no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Issuer would be obliged to pay such additional amounts were a payment in respect of the Notes of this Series then due. Prior to the publication of any notice of redemption pursuant to this Condition 5(b), the Issuer shall deliver to the Fiscal Agent a certificate signed by the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred, and an opinion of independent legal advisers of recognised standing to the effect that the Issuer has or will become obliged to pay such additional amounts as a result of such change or amendment.

**(c) Redemption at the option of the Issuer (Issuer Call)**

If Issuer Call is specified in the applicable Pricing Supplement, the Issuer may, having (unless otherwise specified in the applicable Pricing Supplement) given not more than 60 nor less than 30 days' notice, in accordance with Condition 12, to the holders of the Notes of this Series (which notice shall be irrevocable), redeem all or some only of the Notes of this Series then outstanding on the Optional Redemption Date(s) and at the Optional Redemption Amount(s) specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with accrued interest. Any such redemption must be of a nominal amount not less than the Minimum Redemption Amount and not more than the Maximum Redemption Amount, both as indicated in the applicable Pricing Supplement. In the case of a partial redemption of definitive Notes, the Notes to be redeemed will be selected individually by lot (in such place as the Fiscal Agent may approve and in such manner as the Fiscal Agent shall deem to be appropriate and fair) not more than 60 days prior to the date fixed for redemption and a list of the Notes called for redemption will be published in accordance with Condition 12 not less than 30 days prior to such date. In the case of a partial redemption of Notes which are represented by a Global Note, the relevant interests in the Notes will be selected in accordance with the rules of Euroclear and/or Clearstream, Luxembourg (to be reflected in the records of Euroclear and Clearstream, Luxembourg as either a pool factor or a reduction in nominal amount, at their discretion) and/or DTC and/or the CMU Service (as appropriate).

**(d) Redemption at the option of the Noteholders (Investor Put)**

If Investor Put is specified in the applicable Pricing Supplement, upon the holder of this Note giving (unless otherwise specified in the Pricing Supplement) to the Issuer in accordance with Condition 12 not more than 60 nor less than 30 days' notice (which notice shall be irrevocable) the Issuer will, upon the expiry of such notice, redeem subject to, and in accordance with, the terms specified in the applicable Pricing Supplement in whole (but not in part) this Note on the Optional Redemption Date and at the Optional Redemption Amount specified in, or determined in the manner specified in, the applicable

Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the Optional Redemption Date.

If the Notes are in definitive form and held outside Euroclear, Clearstream, Luxembourg, DTC and the CMU Service, to exercise the right to require redemption of his Notes the holder of the Notes must deliver such Notes, in each case on any Business Day (as defined in Condition 6) falling within the notice period at the specified office of any Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes), accompanied by a duly signed and completed notice of exercise in the form (for the time being current) obtainable from any specified office of any Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) (a “Put Notice”) and in which the holder must specify a bank account (or, if payment is by cheque, an address) to which payment is to be made under this Condition. and, in the case of Registered Notes, the nominal amount thereof to be redeemed and, if less than the full nominal amount of the Registered Notes so surrendered is to be redeemed, an address to which a new Registered Note in respect of the balance of such Registered Notes is to be sent subject to and in accordance with the provisions of Condition 2(b). If this Note is in definitive bearer form, the Put Notice must be accompanied by this Note or evidence satisfactory to the Paying Agent concerned that this Note will, following delivery of the Put Notice, be held to its order or under its control.

If this Note is represented by a Global Note or is in definitive form and held through Euroclear, Clearstream, Luxembourg, DTC or the CMU Service, to exercise the right to require redemption of this Note the holder of this Note must, within the notice period, give notice to the Fiscal Agent of such exercise in accordance with the standard procedures of Euroclear, Clearstream, Luxembourg, DTC and the CMU Service (which may include notice being given on his instruction by Euroclear, Clearstream, Luxembourg, DTC, the CMU Service or any depositary for them to the Fiscal Agent by electronic means or notice being given to the CMU Lodging Agent) in a form acceptable to Euroclear, Clearstream, Luxembourg, DTC, the CMU Service and the CMU Lodging Agent from time to time.

Any Put Notice or other notice given in accordance with the standard procedures of Euroclear, Clearstream, Luxembourg, DTC and the CMU Service given by a holder of any Note pursuant to this Condition 5(d) shall be irrevocable except where, prior to the due date of redemption, an Event of Default has occurred and is continuing, in which event such holder, at its option, may elect by notice to the Issuer to withdraw the notice given pursuant to this Condition 5(d) and instead to declare such Note forthwith due and payable pursuant to Condition 8.

**(e) Purchases**

The Issuer may at any time purchase or otherwise acquire Notes of this Series in the open market or otherwise. Notes purchased or otherwise acquired by the Issuer may be held or resold or, at the discretion of the Issuer, surrendered to the Fiscal Agent for cancellation (together with (in the case of definitive Bearer Notes of this Series) any unmatured Coupons or Receipts attached thereto or purchased therewith). If purchases are made by tender, tenders must be made available to all holders of Notes of this Series alike.

**(f) Early Redemption Amounts**

For the purposes of Condition 5(b) and Condition 8, Notes will be redeemed at an amount (the “Early Redemption Amount”) determined as follows:

- (i) in the case of a Note with a Final Redemption Amount equal to the Issue Price, at the Final Redemption Amount thereof; or

- (ii) in the case of Notes (other than a Zero Coupon Note but including an Instalment Note and a Partly Paid Note) with a Final Redemption Amount which is or may be less or greater than the Issue Price or which is payable in a Specified Currency other than that in which the Notes are denominated, at the amount set out in, or determined in the manner set out in, the applicable Pricing Supplement or, if no such amount or manner is set out in the Pricing Supplement, at their nominal amount; or
- (iii) in the case of a Zero Coupon Note, at an amount (the “Amortised Face Amount”) equal to the sum of:
  - (A) the Reference Price; and
  - (B) the product of the Accrual Yield (compounded annually) being applied to the Reference Price from (and including) the Issue Date of the first Tranche of the Notes to (but excluding) the date fixed for redemption or (as the case may be) the date upon which such Note becomes due and repayable.

Where such calculation is to be made for a period which is not a whole number of years, it shall be made (I) in the case of a Zero Coupon Note other than a Zero Coupon Note payable in euro, on the basis of a 360-day year consisting of 12 months of 30 days each or (II) in the case of Zero Coupon Note payable in euro, on the basis of the actual number of days elapsed divided by 365 (or, if any of the days elapsed falls in a leap year, the sum of (x) the number of those days falling in a leap year divided by 366 and (y) the number of those days falling in a non-leap year divided by 365) or (in either case) on such other calculation basis as may be specified in the applicable Pricing Supplement.

If the amount payable in respect of any Zero Coupon Note upon redemption of such Zero Coupon Note pursuant to Condition 5(a), (b), (c) or (d) or upon its becoming due and repayable as provided in Condition 8 is improperly withheld or refused, the amount due and repayable in respect of such Zero Coupon Note shall be the amount calculated as provided in this Condition 5(f)(iii) as though the references herein to the date fixed for redemption or the date upon which the Zero Coupon Note becomes due and repayable were replaced by references to the date (the “Reference Date”) which is the earlier of:

- (1) the day on which all sums due in respect of the Zero Coupon Note up to that day are received by or on behalf of the holder of such Note; and
- (2) the day on which the Fiscal Agent has notified the holder thereof (either in accordance with Condition 12 or individually) of receipt of all sums due in respect thereof up to that date.

The calculation of the Amortised Face Amount in accordance with this Condition 5(f)(iii) will continue to be made, after as well as before judgement, until the Reference Date unless the Reference Date falls on or after the Maturity Date, in which case the amount due and repayable shall be the nominal amount of such Note together with any interest which may accrue in accordance with Condition 4(c).

**(g) Cancellation**

All Notes redeemed, and all Notes purchased or otherwise acquired as aforesaid and surrendered to the Fiscal Agent for cancellation, shall be cancelled (together, in the case of definitive Notes, with all unmatured Coupons and Receipts presented therewith), and thereafter may not be re-issued or re-sold.

**(h) Instalments**

Instalment Notes will be redeemed in the Instalment Amounts and on the Instalment Dates. In the case of early redemption, the Early Redemption Amount will be determined pursuant to Condition 5(f) above.

**(i) Partly Paid Notes**

Partly Paid Notes will be redeemed, whether at maturity, early redemption or otherwise in accordance with the provisions of this Condition as amended by the applicable Pricing Supplement.

**6 Payments**

**(a) Method of payment**

Subject as provided below:

- (i) payments in a Specified Currency other than euro will be made by credit or transfer to an account in the relevant Specified Currency (which, in the case of a payment in Japanese yen to a non-resident of Japan, shall be a non-resident account) maintained by the payee with, or, at the option of the payee, by a cheque in such Specified Currency drawn on, a bank in the principal financial centre of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively); and
- (ii) payments in euro will be made by credit or transfer to a euro account (or any other account to which euro may be credited or transferred) specified by the payee or, at the option of the payee, by euro cheque.

Payments will be subject in all cases to (i) any fiscal or other laws and regulations applicable thereto in any jurisdiction, but without prejudice to the provisions of Condition 7, and (ii) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the “Code”) or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto (“FATCA”).

**(b) Presentation of definitive Bearer Notes, Receipts and Coupons**

Payments of principal in respect of definitive Bearer Notes not held in the CMU Service will (subject as provided below) be made in the manner provided in Condition 6(a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of definitive Bearer Notes, and payments of interest in respect of definitive Notes will (subject as provided below) be made as aforesaid only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of Coupons, in each case at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America (including the States and the District of Columbia and its possessions)).

Payments of instalments of principal (if any) in respect of definitive Bearer Notes not held in the CMU Service, other than the final instalment, will (subject as provided below) be made in the manner provided in Condition 6(a) above against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Receipt in accordance with the preceding paragraph. Payment of the final instalment will be made in the manner provided in Condition 6(a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Bearer Note in accordance with Condition 6(a). Each Receipt must be presented for payment of the relevant instalment together with the definitive Bearer Note to which it appertains. Receipts presented without the definitive Bearer Note to which they appertain do not constitute valid obligations of the Issuer. Upon the date on which any definitive Bearer Note becomes due and repayable, unmaturing Receipts (if any)

relating thereto (whether or not attached) shall become void and no payment shall be made in respect thereof.

Fixed Rate Notes in definitive bearer form (other than Dual Currency Notes, Index Linked Notes or Long Maturity Notes (as defined below)) should be presented for payment together with all unmatured Coupons appertaining thereto (which expression shall for this purpose include Coupons falling to be issued on exchange of matured Talons), failing which the amount of any missing unmatured Coupon (or, in the case of payment not being made in full, the same proportion of the amount of such missing unmatured Coupon as the sum so paid bears to the sum due) will be deducted from the sum due for payment. Each amount of principal so deducted will be paid in the manner mentioned above against surrender of the relative missing Coupon at any time before the expiry of 10 years after the Relevant Date (as defined in Condition 7) in respect of such principal (whether or not such Coupon would otherwise have become void under Condition 9) or, if later, five years from the date on which such Coupon would otherwise have become due, but in no event thereafter.

Upon any Fixed Rate Note in definitive bearer form becoming due and repayable prior to its Maturity Date, all unmatured Talons (if any) appertaining thereto will become void and no further Coupons will be issued in respect thereof.

Upon the date on which any Floating Rate Note, Dual Currency Note, Index Linked Interest Note or Long Maturity Note in definitive bearer form not held in the CMU Service becomes due and repayable, unmatured Coupons and Talons (if any) relating thereto (whether or not attached) shall become void and no payment or, as the case may be, exchange for further Coupons shall be made in respect thereof. A "Long Maturity Note" is a Fixed Rate Note (other than a Fixed Rate Note which on issue had a Talon attached) whose nominal amount on issue is less than the aggregate interest payable thereon provided that such Note shall cease to be a Long Maturity Note on the Interest Payment Date on which the aggregate amount of interest remaining to be paid after that date is less than the nominal amount of such Note.

In the case of definitive Bearer Notes held in the CMU Service, payment will be made at the direction of the bearer to the CMU Accountholders and such payment made in accordance thereof shall discharge the obligations of the Issuer in respect of that payment.

If the due date for redemption of any definitive Bearer Note is not an Interest Payment Date, interest (if any) accrued in respect of such Note from (and including) the preceding or Interest Payment Date or, as the case may be, the Interest Commencement Date shall be payable only against surrender of the relevant definitive Bearer Note.

**(c) Payments in respect of Bearer Global Notes**

Payments of principal and interest (if any) in respect of Notes represented by any Bearer Global Note will (subject as provided below) be made in the manner specified above in relation to definitive Bearer Notes and otherwise in the manner specified in the relevant Global Note (i) in the case of a Bearer Global Note lodged with the CMU Service, at the direction of the bearer to the CMU Accountholders, or (ii) in the case of a Bearer Global Note not lodged with the CMU Service, against presentation or surrender, as the case may be, of such Bearer Global Note at the specified office of any Paying Agent outside the United States. A record of each payment made against presentation or surrender of any Bearer Global Note, distinguishing between any payment of principal and any payment of interest, will be made on such Global Note (in the case of a Bearer Global Note not lodged with the CMU Service) by the Paying Agent to which it was presented or in the records of Euroclear and Clearstream, Luxembourg, as applicable or (in the case of a Bearer Global Note lodged with the CMU Service) on withdrawal of such

Bearer Global Note by the CMU Lodging Agent, and in each such case, such record shall be prima facie evidence that the payment in question has been made.

**(d) Payments in respect of Registered Notes**

Payments of principal (other than instalments of principal prior to the final instalment) in respect of each Registered Note (whether or not in global form) will be made against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the Registered Note at the specified office of the Registrar or any of the Paying Agents. Such payments will be made by transfer to the Designated Account (as defined below) of the holder (or the first named of joint holders) of the Registered Note appearing in the register of holders of the Registered Notes maintained by the Registrar (the “Register”) (i) where in global form, at the close of the business day (being for this purpose, in respect of Notes clearing through Euroclear and Clearstream, Luxembourg, a day on which Euroclear and Clearstream, Luxembourg are open for business, in respect of Notes clearing through the CMU Service, a day on which the CMU Service is open for business and in respect of Notes clearing through the DTC, a day on which DTC is open for business) before the relevant due date, and (ii) where in definitive form, at the close of business on the third business day (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar is located) before the relevant due date. Notwithstanding the previous sentence, if (a) a holder does not have a Designated Account or (b) the principal amount of the Notes held by a holder is less than U.S.\$250,000 (or its approximate equivalent in any other Specified Currency), payment will instead be made by a cheque in the Specified Currency drawn on a Designated Bank (as defined below). For these purposes, “Designated Account” means the account (which, in the case of a payment in Japanese yen to a non-resident of Japan, shall be a non-resident account) maintained by a holder with a Designated Bank and identified as such in the Register and “Designated Bank” means (in the case of payment in a Specified Currency other than euro) a bank in the principal financial centre of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively) and (in the case of a payment in euro) any bank which processes payments in euro.

Payments of interest and payments of instalments of principal (other than the final instalment) in respect of each Registered Note (whether or not in global form) will be made by a cheque in the Specified Currency drawn on a Designated Bank and mailed by uninsured mail on the business day in the city where the specified office of the Registrar is located immediately preceding the relevant due date to the holder (or the first named of joint holders) of the Registered Note appearing in the Register (i) where in global form, at the close of the business day (being for this purpose, in respect of Notes clearing through Euroclear and Clearstream, Luxembourg, a day on which Euroclear and Clearstream, Luxembourg are open for business, in respect of Notes clearing through the CMU Service, a day on which the CMU Service is open for business and in respect of Notes clearing through the DTC, a day on which DTC is open for business) before the relevant due date, and (ii) where in definitive form, at the close of business on the fifteenth day (whether or not such fifteenth day is a business day) before the relevant due date (the “Record Date”) at his address shown in the Register on the Record Date and at his risk. Upon application of the holder to the specified office of the Registrar not less than three business days in the city where the specified office of the Registrar is located before the due date for any payment of interest in respect of a Registered Note, the payment may be made by transfer on the due date in the manner provided in the preceding paragraph. Any such application for transfer shall be deemed to relate to all future payments of interest (other than interest due on redemption) and instalments of principal (other than the final instalment) in respect of the Registered Notes which become payable to the holder who has made the initial application until such time as the Registrar is notified in writing to the contrary by such holder. Payment of the interest due in respect of each Registered Note on redemption and the final

instalment of principal will be made in the same manner as payment of the principal amount of such Registered Note. Holders of Registered Notes will not be entitled to any interest or other payment for any delay in receiving any amount due in respect of any Registered Note as a result of a cheque posted in accordance with this Condition arriving after the due date for payment or being lost in the post. No commissions or expenses shall be charged to such holders by the Registrar in respect of any payments of principal or interest in respect of the Registered Notes.

All amounts payable to DTC or its nominee as registered holder of a Registered Global Note in respect of Notes denominated in a Specified Currency other than U.S. dollars shall be paid by transfer by the Issuer to an account in the relevant Specified Currency of the Exchange Agent on behalf of DTC or its nominee for conversion into and payment in U.S. dollars in accordance with the provisions of the Agency Agreement. In the case of Registered Note (whether or not in global form) held in the CMU Service, payment will be made at the direction of the registered holder to the CMU Accountholders and such payment shall discharge the obligations of the Issuer in respect of that payment.

None of the Issuer or the Agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

**(e) General provisions applicable to payments**

The holder of a Global Note (if the Global Note is not lodged with the CMU Service) or the CMU Accountholder at the direction of the holder of a Global Note (if the Global Note is lodged with the CMU Service), shall be the only person entitled to receive payments in respect of Notes represented by such Global Note and the Issuer will be discharged by payment to, or to the order of, the holder of such Global Note in respect of each amount so paid. Each of the persons shown in the records of Euroclear, Clearstream, Luxembourg, DTC or the CMU Service as the beneficial holder of a particular nominal amount of Notes represented by such Global Note must look solely to Euroclear, Clearstream, Luxembourg, DTC or the CMU Service, as the case may be, for his share of each payment so made by the Issuer to, or to the order of, the holder of such Global Note.

Notwithstanding the foregoing provisions of this Condition, if any amount of principal and/or interest in respect of Bearer Notes is payable in U.S. dollars, such U.S. dollar payments of principal and/or interest in respect of such Notes will be made at the specified office of a Paying Agent in the United States if:

- (i) the Issuer has appointed Paying Agents with specified offices outside the United States with the reasonable expectation that such Paying Agents would be able to make payment in U.S. dollars at such specified offices outside the United States of the full amount of principal and interest on the Bearer Notes in the manner provided above when due;
- (ii) payment of the full amount of such principal and interest at all such specified offices outside the United States is illegal or effectively precluded by exchange controls or other similar restrictions on the full payment or receipt of principal and interest in U.S. dollars; and
- (iii) such payment is then permitted under United States law without involving, in the opinion of the Issuer, adverse tax consequences to the Issuer.

**(f) Payment Day**

If the date for payment of any amount in respect of any Note, Receipt or Coupon is not a Payment Day, the holder thereof shall not be entitled to payment until the next following Payment Day in the relevant

place and shall not be entitled to further interest or other payment in respect of such delay. For these purposes, "Payment Day" means any day which (subject to Condition 9) is:

- (i) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in:
  - (A) in the case of Notes in definitive form only, the relevant place of presentation;
  - (B) any Additional Financial Centre specified in the applicable Pricing Supplement;
- (ii) either (1) in relation to any sum payable in a Specified Currency other than euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial centre of the country of the relevant Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively) or (2) in relation to any sum payable in euro, a day on which the TARGET2 System is open; and
- (iii) in the case of any payment in respect of a Registered Global Note denominated in a Specified Currency other than U.S. dollars and registered in the name of DTC or its nominee and in respect of which an accountholder of DTC (with an interest in such Registered Global Note) has elected to receive any part of such payment in U.S. dollars, a day on which commercial banks are not authorised or required by law or regulation to be closed in New York City.

**(g) Interpretation of principal and interest**

Any reference in these Terms and Conditions to principal in respect of the Notes shall be deemed to include, as applicable:

- (i) any additional amounts which may be payable with respect to principal under Condition 7;
- (ii) the Final Redemption Amount of the Notes;
- (iii) the Early Redemption Amount of the Notes;
- (iv) the Optional Redemption Amount(s) (if any) of the Notes;
- (v) in relation to Notes redeemable in instalments, the Instalment Amounts;
- (vi) in relation to Zero Coupon Notes, the Amortised Face Amount (as defined in Condition 5(f)(iii)); and
- (vii) any premium and any other amounts (other than interest) which may be payable by the Issuer under or in respect of the Notes.

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 7.

**(h) Exchange of Talons**

On and after the Interest Payment Date, as appropriate, on which the final Coupon comprised in any Coupon sheet matures, the Talon (if any) forming part of such Coupon sheet may be surrendered at the specified office of any of the Paying Agents in exchange for a further Coupon sheet including (if such further Coupon sheet does not include Coupons to, and including, the final date for the payment of interest due in respect of the Note to which it appertains) a further Talon, subject to the provisions of

Condition 9. Each Talon shall, for the purposes of these Terms and Conditions, be deemed to mature on the Interest Payment Date on which the final Coupon comprised in the relative Coupon sheet matures.

## **7 Taxation**

All payments of principal and/or interest in respect of the Notes, Receipts and Coupons of this Series will be made without deduction or withholding for or on account of any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or on behalf of any Tax Jurisdiction (as defined below) or any authority therein having power to tax, unless deduction or withholding of such tax is compelled by law. In that event the Issuer will pay such additional amounts as will result (after such deduction or withholding) in the receipt by the holders of the Notes, Receipts or Coupons of this Series of the amounts which would otherwise have been receivable (in the absence of such deduction or withholding), except that no such additional amount shall be payable in respect of any Note, Receipt or Coupon of this Series presented for payment:

- (a) by or on behalf of a holder who is subject to such tax in respect of such Note, Receipt or Coupon by reason of his being connected with a Tax Jurisdiction otherwise than merely by holding such Note, Receipt or Coupon or receiving principal or interest in respect thereof; or
- (b) held by, or by a third party on behalf of, a holder which is liable to such taxes, duties, assessments or governmental charges in respect of such Note or Coupon by reason of its (or a fiduciary, settlor, member or shareholder, beneficiary of, or possessor of a power over, such holder, if such holder is an estate, trust, partnership or corporation) having some present or former connection with the applicable Tax Jurisdiction (including being or having been a citizen or resident of such Tax Jurisdiction or being or having been engaged in trade or business or present therein having or having had a permanent establishment therein) other than the mere holding of such Note or Coupon; or
- (c) by or on behalf of a holder who would not be liable for or subject to such withholding or deduction by making a declaration of non-residence or other similar claim for exemption to the relevant tax authority if, after having been requested to make such a declaration or claim, such holder fails to do so; or
- (d) more than 30 days after the Relevant Date except to the extent that the holder thereof would have been entitled to such additional payment on presenting the same for payment on such thirtieth day assuming that day to have been a Payment Day (as defined in Condition 6(f)); or
- (e) by or on behalf of a holder which is or was a personal holding company, foreign personal holding company or passive foreign investment company with respect to the United States or a corporation that accumulates earnings to avoid United States federal income tax; or
- (f) if such tax is an estate, inheritance, gift, sales, transfer or personal property tax or any similar tax, assessment, or governmental charge; or
- (g) by or on behalf of a holder which is or has been a “10 per cent. shareholder” of the obligor of the Note as defined in Section 871(h)(3) of the Code or any successor provisions; or
- (h) where such withholding or deduction is imposed pursuant to Sections 1471 through 1474 of the Code, U.S. Treasury regulations or administrative guidance promulgated thereunder or any law implementing an intergovernmental approach thereto; nor shall additional amounts be paid to a holder that is a fiduciary or partnership or other than the sole beneficial owner of such payment to the extent that a beneficiary or settlor of such fiduciary or partnership or beneficial owner would not have been entitled to such additional amounts had such beneficiary, settlor or beneficial owner been the holder of the Note.

As used herein:

- (i) The “Relevant Date” in relation to any Note, Receipt or Coupon means (A) the due date for payment thereof; or (B) (if the full amount of the monies payable on such date has not been received by the Fiscal Agent or the Registrar, as the case may be, on or prior to such due date) the date on which, the full amount of such monies having been so received, notice to that effect is duly given to the Noteholders of this Series in accordance with Condition 12 or individually; and
- (ii) “Tax Jurisdiction” means (A) Korea or any political subdivision or any authority thereof or therein having power to tax and (B) if the Issuer is acting through an overseas branch (as specified in the applicable Pricing Supplement) the jurisdiction relating to such overseas branch or any political subdivision or any authority thereof or therein having power to tax.

## 8 Events of Default

If any one or more of the following events (“Events of Default”) shall have occurred and be continuing:

- (a) default is made in any payment of principal or interest in respect of any of the Notes, Receipts or Coupons of this Series and such default continues for 14 days or more, in the case of principal, or 21 days or more, in the case of interest; or
- (b) default is made in the performance of any other covenant, condition or provision contained in the Notes of this Series and such default continues for 30 days or more after written notice thereof shall have been given to the Fiscal Agent or the Registrar, as the case may be, by the holder of any Note of this Series; or
- (c) any External Indebtedness (as defined below) of the Issuer in an aggregate principal amount of U.S.\$10,000,000 or more either (i) becomes due and payable prior to the due date for payment thereof by reason of default by the Issuer or (ii) is not repaid at maturity as extended by the period of grace, if any, applicable thereto, or any guarantee given by the Issuer in respect of External Indebtedness of any other person is not honoured when due and called; or
- (d) Korea declares a moratorium on the payment of any External Indebtedness (including obligations arising under guarantees) of Korea or Korea becomes liable to repay prematurely any sums in respect of such External Indebtedness (including obligations arising under guarantees) as a result of a default under, or breach of the terms applicable to, such External Indebtedness or such obligations, or the international monetary reserves of Korea become subject to any Encumbrance (as defined in Condition 3(b)) or any segregation or other preferential arrangement (whether or not constituting an Encumbrance) for the benefit of any creditor or class of creditors; or
- (e) Korea ceases to Control (as defined below) (directly or indirectly) the Issuer or for any reason fails to provide the financial support to the Issuer stipulated as of the Issue Date of the Notes of this Series by Article 32 of The Korea Development Bank Act of 1953, as amended, (the “KDB Act”); or
- (f) the Issuer is adjudicated or found bankrupt or insolvent or any order is made by a competent court or administrative agency or any resolution is passed by the Issuer to apply for judicial composition proceedings with its creditors or for the appointment of a receiver or trustee or other similar official in insolvency proceedings in relation to the Issuer or a substantial part of its assets or the Issuer is wound up or dissolved or the Issuer ceases to carry on the whole or substantially the whole of its business;

the holder for the time being of any Note of this Series may give notice to the Fiscal Agent in accordance with Condition 12 that such Note is immediately due and repayable, whereupon such Note shall become immediately due and repayable at its Early Redemption Amount together with accrued interest (if any) to the date of

repayment, unless prior to such time all Events of Default in respect of the Notes of this Series shall have been cured.

The Issuer shall notify the holders of the Notes of this Series of the occurrence of an event under Condition 8(e) as soon as practicable thereafter in accordance with Condition 12 setting out details of the cessation or failure described in Condition 8(e).

For the purposes of this Condition:

“Control” means the acquisition or control of a majority of the voting share capital of the Issuer or the right to appoint and/or remove all or the majority of the members of the Issuer’s board of directors or other governing body, whether obtained directly or indirectly, and whether obtained by ownership of share capital, the possession of voting rights, contract or otherwise; and

“External Indebtedness” means any obligation for the payment or repayment of money borrowed which is denominated in a currency other than the currency of Korea.

## **9 Prescription**

Claims for payment of principal in respect of the Notes (whether in bearer or registered form) shall be prescribed upon the expiry of five years, and claims for payment of interest (if any) in respect of the Notes (whether in bearer or registered form) shall be prescribed upon the expiry of two years, in each case from the Relevant Date (as defined in Condition 7) thereof, subject to the provisions of Condition 6. There shall not be included in any Coupon sheet issued on exchange of a Talon any Coupon the claim for payment in respect of which would be void pursuant to this Condition or Condition 6 above.

## **10 Replacement of Notes, Receipts and Coupons**

If any Note (including any Global Note), Receipt or Coupon is mutilated, defaced, stolen, destroyed or lost, it may be replaced at the specified office of the Fiscal Agent (in the case of Bearer Notes, Receipts or Coupons) or the Registrar (in the case of Registered Notes) upon payment by the claimant of the expenses incurred in connection therewith and on such terms as to evidence and indemnity as the Issuer may reasonably require. Mutilated or defaced Notes, Receipts or Coupons must be surrendered before replacements will be issued.

## **11 Meetings of Noteholders and Modification**

The Agency Agreement contains provisions for convening meetings of the holders of the Notes of this Series to consider matters affecting their interests, including modifications by Extraordinary Resolution of the Terms and Conditions of such Notes. The quorum for any meeting convened to consider a resolution proposed as an Extraordinary Resolution shall be one or more persons holding or representing a clear majority in nominal amount of such Notes for the time being outstanding, or at any adjourned such meeting one or more persons being or representing Noteholders whatever the nominal amount of such Notes for the time being outstanding so held or represented, except that at any meeting, the business of which includes, *inter alia*, (i) modification of the Maturity Date of such Notes or reduction or cancellation of the nominal amount payable upon maturity or otherwise, or variation of the method of calculating the amount of principal payable on maturity or otherwise, (ii) reduction of the amount payable or modification of the payment date in respect of any interest in respect of such Notes or variation of the method of calculating the rate of interest in respect of such Notes, except as a result of any modification contemplated in Condition 4(f) or Condition 4(b)(iv), (iii) reduction of any Minimum Interest Rate and/or Maximum Interest Rate, (iv) modification of the currency in which payments under such Notes and/or the Coupons appertaining thereto are to be made, (v) modification of the majority required to pass an Extraordinary Resolution or (vi) modification of the provisions of the Agency Agreement concerning this

exception, the necessary quorum for passing an Extraordinary Resolution will be one or more persons holding or representing not less than three-quarters, or at any adjourned such meeting not less than a clear majority, of the nominal amount of such Notes for the time being outstanding. Any Extraordinary Resolution duly passed at any such meeting will be binding on all such Noteholders (whether or not they are present at such meeting) and on all Receiptholders and Couponholders relating to such Notes.

The Fiscal Agent may agree, without the consent of the holders of the Notes, Receipts or Coupons of this Series, to any modification to any of the provisions of the Agency Agreement or such Notes which is of a formal, minor or technical nature or is made to correct a manifest error. Any such modification shall be binding on all such Noteholders, Receiptholders and Couponholders and, if the Fiscal Agent so requires, shall be notified to such Noteholders as soon as practicable thereafter in accordance with Condition 12.

## 12 Notices

- (a) All notices regarding Bearer Notes of this Series will be valid if published in one leading London daily newspaper (which is expected to be the *Financial Times*). Any notice published as aforesaid shall be deemed to have been given on the date of such publication or, if published more than once, on the date of the first such publication. Receiptholders and Couponholders will be deemed for all purposes to have notice of the contents of any notice given to the holders of the Bearer Notes of this Series in accordance with this Condition.
- (b) All notices regarding the Registered Notes will be deemed to be validly given if sent by first class mail or (if posted to an address foreign) by airmail to the holders (or the first named of joint holders) at their respective addresses recorded in the Register and will be deemed to have been given on the fourth day after mailing and, in addition, for so long as any Registered Notes are listed on a stock exchange or are admitted to trading by another relevant authority and the rules of that stock exchange or relevant authority so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules.
- (c) Until such time as any definitive Notes are issued, there may, so long as all the Global Notes for this Series are held in their entirety on behalf of (i) Euroclear and/or Clearstream, Luxembourg and/or DTC, be substituted, in relation only to this Series, for such publication as aforesaid, the delivery of the relevant notice to Euroclear and/or Clearstream, Luxembourg and/or DTC for communication by them to the holders of the Notes of this Series and (ii) the CMU Service, be substituted for such publication in such newspaper(s) the delivery of the relevant notice to the persons shown in a CMU Instrument Position Report issued by the CMU Service on the second business day preceding the date of despatch of such notice as holding interests in the relevant Global Note and, in addition, in the case of both (i) and (ii) above, for so long as any Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules. Any such notice shall be deemed to have been given to the holders of the Notes of this Series on the third day after the day on which the said notice was given to Euroclear and/or Clearstream, Luxembourg and/or DTC and/or the persons shown in the relevant CMU Instrument Position Report.
- (d) Notices or demands to be given or made by any holder of any Notes of this Series shall be in writing and given by lodging the same, together (in the case of any Note in definitive form) with the relative Note or Notes, with the Fiscal Agent or the Registrar (in the case of Registered Notes).

Whilst any Notes of this Series are represented by a Global Note, such notice or demand may be given or made by a holder of any of the Notes so represented to the Fiscal Agent or the Registrar via Euroclear and/or Clearstream, Luxembourg and/or DTC and/or, in the case of Notes lodged with the CMU Service, by delivery

by such holder of such notice to the CMU Lodging Agent in Hong Kong, as the case may be, in such manner as the Fiscal Agent and Euroclear and/or Clearstream, Luxembourg and/or DTC and/or the CMU Service, as the case may be, may approve for this purpose.

### **13 Agents**

The names of the initial Agents and their initial specified offices in respect of this Series of Notes are set out below. The Issuer reserves the right at any time to vary or terminate the appointment of any Agent and to appoint additional or other Agents and/or to approve any change in the specified office of any Agent, provided that it will, so long as any of the Notes of this Series is outstanding, maintain (i) a Fiscal Agent and a Registrar, (ii) if and so long as any Notes of this Series are listed on any stock exchange or other relevant authority, a Paying Agent (in the case of Bearer Notes) (which may be the Fiscal Agent) and a Transfer Agent (in the case of Registered Notes) having a specified office in such place as may be required by the rules and regulations of the relevant stock exchange (or other relevant authority), (iii) so long as any of the Registered Global Notes payable in a Specified Currency other than U.S. dollars are held through DTC or its nominee, there will at all times be an Exchange Agent with a specified office in New York City, and (iv) so long as the Notes are listed on the Singapore Exchange Securities Trading Limited (the “Singapore Exchange”), if the Notes are issued in definitive form, a Paying Agent in Singapore unless the Issuer obtains an exemption from the Singapore Exchange. Any such variation, termination, appointment or change shall only take effect (other than in the case of insolvency or of a Paying Agent failing to become or ceasing to be exempt from withholding pursuant to FATCA, when such termination or appointment, respectively, shall be of immediate effect) after not less than 30 days’ prior notice thereof shall have been given to the Noteholders of this Series in accordance with Condition 12 and provided further that neither the resignation nor removal of the Agent shall take effect, except in the case of insolvency as aforesaid, until a new Agent has been appointed. In addition, the Issuer shall forthwith appoint a Paying Agent having a specified office in New York City in the circumstances described in Condition 6(d).

In acting under the Agency Agreement, the Agents will act solely as agents of the Issuer and do not assume any obligations or relationships of agency or trust to or with the Noteholders, Receiptholders or Couponholders. The Agency Agreement contains provisions for the indemnification of the Agents and for relief from responsibility in certain circumstances, and entitles any of them to enter into business transactions with the Issuer without being liable to account to the Noteholders, Receiptholders or the Couponholders for any resulting profit.

### **14 Further Issues**

The Issuer may from time to time without the consent of the relevant Noteholders, Couponholders or Receiptholders create and issue further Notes, having terms and conditions the same as the Notes of any Series, or the same except for the amount of the first payment of interest, which may be consolidated and form a single series with the outstanding Notes of any Series.

### **15 Currency Indemnity**

Any amount received or recovered in a currency other than the currency in which payment under the relevant Note, Coupon or Receipt is due (whether as a result of, or of the enforcement of, a judgement or order of a court of any jurisdiction, in the winding-up or dissolution of the Issuer or otherwise) by any Noteholder or Couponholder in respect of any sum expressed to be due to it from the Issuer shall only constitute a discharge to the Issuer to the extent of the amount in the currency of payment under the relevant Note, Coupon or Receipt that the recipient is able to purchase with the amount so received or recovered in that other currency on the date of that receipt or recovery (or, if it is not practicable to make that purchase on that date, on the first date on

which it is practicable to do so). If the amount received or recovered is less than the amount expressed to be due to the recipient under any Note, Coupon or Receipt, the Issuer shall indemnify it against any loss sustained by it as a result. In any event, the Issuer shall indemnify the recipient against the cost of making any such purchase. For the purposes of this Condition, it shall be sufficient for the Noteholder or Couponholder, as the case may be, to demonstrate that it would have suffered a loss had an actual purchase been made. These indemnities constitute a separate and independent obligation from the Issuer's other obligations, shall give rise to a separate and independent cause of action, shall apply irrespective of any indulgence granted by any Noteholder or Couponholder and shall continue in full force and effect despite any other judgement, order, claim or proof for a liquidated amount in respect of any sum due under any Note, Coupon or Receipt or any other judgement or order.

## **16 Contracts (Rights of Third Parties) Act 1999**

No rights are conferred on any person under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this Note, but this does not affect any right or remedy of any person which exists or is available apart from that Act.

## **17 Governing Law and Jurisdiction**

The Notes, the Receipts, the Coupons, the Agency Agreement, the Deed of Covenant and any noncontractual obligations arising out of or in connection with the Notes, the Receipts, the Coupons, the Agency Agreement, the Deed Poll, and the Deed of Covenant are governed by, and shall be construed in accordance with, the laws of England.

The Issuer irrevocably agrees for the benefit of the Noteholders, Receiptholders and Couponholders that the courts of England are to have jurisdiction to settle any disputes which may arise out of or in connection with the Agency Agreement, the Notes, the Receipts or the Coupons (including a dispute relating to any noncontractual obligations arising out of or in connection with the Notes, the Receipts, the Coupons, the Agency Agreement, the Deed Poll, and/or the Deed of Covenant) and that accordingly any suit, action or proceedings arising out of or in connection therewith (together referred to as "Proceedings") (including any Proceeding relating to any noncontractual obligations arising out of or in connection with the Notes, the Receipts, the Coupons, the Agency Agreement, the Deed Poll, and/or the Deed of Covenant) may be brought in the courts of England.

The Issuer irrevocably waives, to the fullest extent permitted by law, any objection which it may have now or hereafter to the laying of the venue of any Proceedings in the courts of England and any claim that any Proceedings have been brought in an inconvenient forum and irrevocably agrees that a judgement in any Proceedings brought in the courts of England shall be conclusive and binding upon the Issuer and may be enforced in the courts of any other jurisdiction. Nothing contained in this Condition shall limit any right to take Proceedings against the Issuer in any other court of competent jurisdiction, nor shall the taking of Proceedings in one or more jurisdictions preclude the taking of Proceedings in any other jurisdiction, whether concurrently or not.

The Issuer hereby appoints The Korea Development Bank, London branch (which is located at Floor 11 (West Side), 22 Bishopsgate, London EC2N 4BQ, United Kingdom, and the mailing address of which is Consolidation Centre Gate 1, Units 1-3, Manor Point, Manor Way, Borehamwood Hertfordshire, WD6 1EU, United Kingdom, Attention: General Manager) as its agent for service of process in England in respect of any Proceedings and undertakes that in the event of it ceasing so to act it will appoint another person as its agent for that purpose.

In respect of any Proceedings, the Issuer hereby irrevocably consents to the giving of any relief and the issue of any process in connection with such Proceedings, including, without limitation, the making, enforcement or

execution (against any assets whatsoever, irrespective of their uses or intended uses), of any order or judgement made or given in any such Proceedings, and, to the extent that the Issuer may in any jurisdiction claim for itself or its assets, or have attributed to it or its assets, any right of immunity on the grounds of sovereignty or otherwise from any legal action, suit or proceeding, the Issuer hereby irrevocably agrees not to claim and waives such immunity to the fullest extent permitted by law.

## **USE OF PROCEEDS**

The net proceeds from the sale of Notes will be used by the Issuer for its general operations, including the repayment of foreign currency obligations and the making of foreign currency loans.

## EXCHANGE RATES

The table below sets forth the market average exchange rates between Won and U.S. dollars, as announced by the Seoul Money Brokerage Services Ltd., for the last day of, and the average for, the periods indicated. No representation is made that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all.

Period	At End of Period	Average Rate <sup>(1)</sup>	High	Low
2014.....	1,099.2	1,053.2	1,118.3	1,008.9
2015.....	1,172.0	1,131.5	1,203.1	1,068.1
2016.....	1,208.5	1,160.5	1,240.9	1,093.2
2017.....	1,071.4	1,130.8	1,208.5	1,071.4
2018.....	1,118.1	1,100.3	1,142.5	1,057.6
2019.....	1,157.8	1,165.7	1,218.9	1,111.6
2020.....	1,088.0	1,180.1	1,280.1	1,082.7
2021.....	1,185.5	1,144.4	1,199.1	1,083.1
2022 (through 24 August).....	1,341.8	1,251.2	1,341.8	1,185.5
January.....	1,202.4	1,194.0	1,202.4	1,185.5
February.....	1,202.7	1,198.3	1,205.7	1,192.1
March.....	1,210.8	1,221.0	1,241.7	1,203.6
April.....	1,269.4	1,232.3	1,269.4	1,210.7
May.....	1,245.8	1,269.9	1,286.4	1,245.8
June.....	1,292.9	1,277.4	1,300.7	1,238.4
July.....	1,304.0	1,307.4	1,323.7	1,294.2
August (through 24 August).....	1,341.8	1,311.8	1,341.8	1,298.6

Source: Seoul Money Brokerage Services, Ltd.

Note:

- (1) The average rate for each year is calculated as the average of the market average exchange rates on each business day during the relevant year (or portion thereof). The average rate for a month is calculated as the average of the market average exchange rates on each business day during the relevant month (or portion thereof).

## THE KOREA DEVELOPMENT BANK

### Overview

The Bank was established in 1954 as a government-owned financial institution pursuant to The Korea Development Bank Act, as amended, or the KDB Act. Since its establishment, the Bank has been the leading bank in the Republic with respect to the provision of long-term financing for projects designed to assist the nation's economic growth and development. The Government directly owns all of the Bank's paid-in capital. The Bank's registered office is located at 14, Eunhaeng-ro, Yeongdeungpo-gu, Seoul, The Republic of Korea. The Bank's primary purpose, as stated in the KDB Act, the KDB Decree and the Bank's Articles of Incorporation, is to "furnish funds in order to expedite the development of the national economy". The Bank makes loans available to major industries for equipment, capital investment and the development of high technology, as well as for working capital.

As of 31 December 2021, the Bank had ₩174,917.2 billion of loans outstanding (including loans, call loans, domestic usance, bills of exchange bought, local letters of credit negotiation and loan-type suspense accounts pursuant to the applicable guidelines without adjusting for allowance for loan losses, present value discounts and deferred loan fees), total assets of ₩276,421.9 billion and total equity of ₩36,502.9 billion, as compared to ₩159,083.6 billion of loans outstanding, ₩251,852.0 billion of total assets and ₩30,382.5 billion of total equity as of 31 December 2020. In 2021, the Bank recorded interest income of ₩4,125.3 billion, interest expense of ₩2,466.7 billion and net income of ₩2,461.8 billion, as compared to ₩4,441.6 billion of interest income, ₩3,162.0 billion of interest expense and ₩487.5 billion of net income in 2020. See "—Selected Financial Statement Data".

Currently, the Government directly holds 100% of the Bank's paid-in capital. In addition to contributions to the Bank's capital, the Government provides direct financial support for the Bank's financing activities, in the form of loans or guarantees. The Government has the power to elect or dismiss the Bank's Chairman and Chief Executive Officer, members of the Bank's Board of Directors and Auditor. The Government may dismiss each such person if he/she (i) violates the KDB Act, an order issued thereunder, or the Articles of Incorporation or (ii) is unable to perform his/her duties due to physical or mental disability. The Chairman may be dismissed by the President of the Republic at the recommendation of the chairman of the Financial Services Commission. The Chief Executive Officer and members of the Board of Directors may be dismissed by the Financial Services Commission at the recommendation of the Chairman and the Auditor may be dismissed by the Financial Services Commission. There is no prescribed timeline for dismissal. Pursuant to the KDB Act, the Financial Services Commission has supervisory power and authority over matters relating to the Bank's general business including, but not limited to, capital adequacy and managerial soundness.

The Government supports the Bank's operations pursuant to Article 32 of the KDB Act. Article 32 provides that "the annual net losses of the Korea Development Bank shall be offset each year by the reserve, and if the reserve be insufficient, the deficit shall be replenished by the Government". As a result of the KDB Act, the Government is generally responsible for the Bank's operations and is legally obligated to replenish any deficit that arises if the Bank's reserve, consisting of its surplus and capital surplus items, is insufficient to cover the Bank's annual net losses. In light of the above, if the Bank had insufficient funds to make any payment under any of its obligations, including the debt securities and guarantees covered by this Information Memorandum, the Government would take appropriate steps, such as by making a capital contribution, by allocating funds or by taking other action, to enable the Bank to make such payment when due. The provisions of Article 32 do not, however, constitute a direct guarantee by the Government of the Bank's obligations under the debt securities or the guarantees, and the provisions of the KDB Act, including Article 32, may be amended at any time by action of the National Assembly.

In January 1998, the Government amended the KDB Act to:

- subordinate the Bank's borrowings from the Government to other indebtedness incurred in the Bank's operations;
- allow the Government to offset any deficit that arises if the Bank's reserve fails to cover its annual net losses by transferring Government-owned property, including securities held by the Government, to the Bank; and
- allow direct injections of capital by the Government without prior National Assembly approval.

The Government amended the KDB Act in May 1999 and the KDB Decree in March 2000, to allow the Financial Services Commission to supervise and regulate the Bank in terms of capital adequacy and managerial soundness.

In March 2002, the Government amended the KDB Act to enable the Bank, among other things, to:

- obtain low-cost funds from The Bank of Korea and from the issuance of debt securities (in addition to already permitted industrial finance bonds), which funds may be used for increased levels of lending to small and medium size enterprises;
- broaden the scope of borrowers to which the Bank may extend working capital loans to include companies in the manufacturing industry, enterprises which are "closely related" to enhancing the corporate competitiveness of the manufacturing industry and leading-edge high-tech companies; and
- extend credits to mergers and acquisitions projects intended to facilitate corporate restructuring efforts.

In July 2005 and May 2009, the Government amended the KDB Act to provide that:

- (1) the Bank's annual net profit, after adequate allowances are made for depreciation in assets, shall be distributed as follows:
  - (i) 40% or more of the net profit shall be credited to reserve, until the reserve amounts equal the total amount of paid-in capital; and
  - (ii) any net profit remaining following the apportionment required under subparagraph (i) above shall be distributed in accordance with the resolution of the Bank's Board of Directors and the approval of the Bank's shareholders;
- (2) accumulated amounts in reserve may be capitalised after offsetting any net losses; and
- (3) any distributions made in accordance with paragraph (1)(ii) above may be in the form of cash dividends or dividends in kind, provided that any distributions of dividends in kind must be made in accordance with applicable provisions of the KDB Decree.

In February 2008, the Government further amended the KDB Act, primarily to transfer most of the Government's supervisory authority over the Bank from the Ministry of Economy and Finance to the Financial Services Commission.

In May 2009, the Government amended the KDB Act to facilitate the Bank's privatisation. The amendment provided for, among others:

- the preparation for the transformation of the Bank from a special statutory entity into a corporation, including the application of the Banking Act as applicable;
- the expansion of the Bank's operation scope that enables the Bank to engage in commercial banking activities, including retail banking (which was subsequently adjusted due to a change in the

Government's decision to halt its plan for the Bank's privatisation and to consolidate and strengthen the Bank's public financing role, utilising its rich experience and expertise in public policy financing);

- the provision of government guarantees for the Bank's mid-to-long term foreign currency debt outstanding at the time of initial sale of the Government's stake in KDB Financial Group ("**KDBFG**") (subject to the National Assembly's authorisation of the Government guarantee amount) and possible guarantees for the Bank's foreign currency debt incurred for the refinancing of such mid-to-long term foreign currency debt with the government guarantee during the period when the Government owns more than 50% of its shares; and
- the establishment of KDBFG and Korea Finance Corporation ("**KoFC**") and application of the Financial Holding Company Act to KDBFG.

In May 2014, the Government and the National Assembly amended the KDB Act to streamline the financial policy roles among Government-owned banks and financial corporations in order to better respond systematically to rapidly changing domestic and international economic conditions by merging KDBFG and KoFC into the Bank. The amended KDB Act provides, among others, that:

- the Government will halt its plan for the Bank's privatisation;
- public policy financing will be consolidated and strengthened through the newly merged entity;
- the Bank will comprehensively succeed to the properties, rights and obligations of KDBFG and KoFC upon the consummation of the merger;
- the bonds issued by KDBFG and the policy bank bonds issued by the KoFC shall be deemed as the industrial financial bonds issued by the Bank;
- the business engaged in by KoFC in accordance with the Korea Finance Corporation Act or other laws and decrees will be continuously performed by the Bank; and
- the repayment of the principal of and interest on foreign currency debt (with an original maturity of one year or more at the time of issuance) incurred by KoFC and the Bank before this amended KDB Act comes into force shall be guaranteed by the Government at the time of initial sale by the Government of its equity interest in the Bank, subject to the approval by the National Assembly.

In May 2020, the Government amended the KDB Act in order to provide statutory grounds for the establishment of the Key Industry Stabilization Fund to support businesses in certain key industries that face financial difficulties resulting from the ongoing COVID-19 pandemic. See "The Republic of Korea—The Economy—Worldwide Economic and Financial Difficulties" and "—Selected Financial Statement Data—Loans to Financially Troubled Companies."

The Minister of Economy and Finance of the Republic has, on behalf of the Republic, signed the registration statement of which this Information Memorandum forms a part.

### **Capitalisation**

As of 31 December 2021, the Bank's authorised capital was ₩30,000 billion and its capitalisation was as follows:

	<b>31 December 2021<sup>(1)</sup></b>
	<i>(billions of Won)</i>
Long-term debt <sup>(2)</sup> :	
Won currency borrowings .....	₩3,951.6
Industrial finance bonds .....	144,355.6
Foreign currency borrowings .....	2,308.2
Total long-term debt .....	150,615.4 <sup>(3)(4)</sup>
Capital:	
Paid-in capital .....	21,886.6
Capital surplus .....	2,479.0
Retained earnings <sup>(5)</sup> .....	7,363.8
Accumulated other comprehensive income .....	4,773.5
Total capital .....	36,502.9
Total capitalisation .....	₩187,118.3

Notes:

- (1) Except as disclosed in this Information Memorandum, there has been no material adverse change in the Bank's capitalisation since 31 December 2021.
- (2) Defined as debt that has a maturity at issuance of one year or more.
- (3) The Bank has translated borrowings in foreign currencies into Won at the rate of ₩1,185.5 to US\$1.00, which was the market average exchange rate, as announced by the Seoul Monetary Brokerage Services Ltd., on 31 December 2021.
- (4) As of 31 December 2021, the Bank had confirmed acceptances and guarantees totalling ₩7,748.8 billion under outstanding guarantees issued on behalf of its clients. See “—Financial Statements and the Auditors—Notes to Separate Financial Statements of 31 December 2021 and 2020—Note 40.”
- (5) Includes regulatory reserve for credit losses of ₩482.9 billion as of 31 December 2021. If the Bank's allowance for credit losses is deemed insufficient for regulatory purposes, the Bank compensates for the difference by recording a regulatory reserve for credit losses, which is shown as a separate item included in retained earnings. See “—Financial Statements and the Auditors—Notes to Separate Financial Statements of 31 December 2021 and 2020—Note 24.”

## Business

### *Purpose and Authority*

Since its establishment, the Bank has been the leading bank in the Republic in providing long-term financing for projects designed to assist the nation's economic growth and development.

Under the KDB Act, the KDB Decree and the Bank's Articles of Incorporation, the Bank's primary purpose is to “contribute to the sound development of the financial industry and the national economy by supplying and managing funds necessary for the development and promotion of industries, expansion of social infrastructure, development of regions, stabilisation of the financial markets and facilitation of sustainable growth.” Since the Bank serves the public policy objectives of the Government, the Bank does not seek to maximise profits. The

Bank does, however, strive to maintain a level of profitability to strengthen its equity base and support growth in the volume of its business.

Under the KDB Act, the Bank may:

- carry out activities necessary to accomplish the expansion of the national economy, subject to the approval of the Financial Services Commission;
- provide loans or discount notes;
- subscribe to, underwrite or invest in securities;
- guarantee or assume indebtedness;
- raise funds by accepting demand deposits and time and savings deposits from the general public, issuing securities, borrowing from the Government, The Bank of Korea or other financial institutions, and borrowing from overseas;
- execute foreign exchange transactions, including currency and interest swap transactions;
- provide planning, management, research and other support services at the request of the Government, public bodies, financial institutions or enterprises;
- manage and operate various funds established pursuant to Government-led initiatives; and
- carry out other businesses incidental to the foregoing (subject to the approval of the Financial Services Commission).

### ***Government Support and Supervision***

The Government owns directly all of the Bank's paid-in capital. Since the Bank's establishment, the Government has made capital contributions not only in cash but also in the form of shares of common stock of Government-affiliated entities. Recent examples include the Government's contributions to the Bank's capital of (i) ₩250 billion in the form of shares of common stock of Incheon Port Authority and Yeosu Gwangyang Port Authority, ₩80 billion in cash and ₩65 billion in cash in May 2017, September 2017 and December 2017, respectively, (ii) ₩170 billion in cash in June 2018, (iii) ₩500 billion in cash and ₩55 billion in cash in March 2019 and September 2019, respectively, (iv) ₩451 billion in cash and ₩1,652 billion in cash in April 2020 and July 2020, respectively, and (v) ₩510 billion in cash and ₩611 billion in cash in January 2021 and May 2021, respectively. Taking into account these capital contributions, as of 31 December 2021, the Bank's total paid-in capital was ₩21,886.6 billion. See "—Financial Statements and the Auditors—Notes to Separate Financial Statements of 31 December 2021 and 2020—Note 24." In March 2022, the Government contributed ₩392 billion in cash to the Bank's capital.

In addition to capital contributions, the Government directly supports the Bank's financing activities by:

- lending the Bank funds to on-lend;
- allowing the Bank to administer Government loans made from a range of special Government funds;
- allowing the Bank to administer some of The Bank of Korea's surplus foreign exchange holdings; and
- allowing the Bank to receive credit from The Bank of Korea.

The Government also supports the Bank's operations pursuant to Articles 31 and 32 of the KDB Act. Article 31 provides that "40% or more of the annual net profit of the Korea Development Bank shall be transferred to reserve, until the reserve amounts equal the total amount of authorised capital" and that accumulated amounts in reserve may be capitalised. Article 32 provides that "the net losses of the Korea Development Bank shall be

offset each fiscal year by the reserve, and if the reserve be insufficient, the deficit shall be replenished by the Government”.

As a result of the KDB Act, the Government is generally responsible for the Bank’s operations and is legally obligated to replenish any deficit that arises if the Bank’s reserve, consisting of its surplus and capital surplus items, is insufficient to cover its annual net losses. In light of the above, if the Bank had insufficient funds to make any payment under any of its obligations, including the debt securities and the guarantees covered by this Information Memorandum, the Government would take appropriate steps, such as by making a capital contribution, by allocating funds or by taking other action, to enable the Bank to make such payment when due. The provisions of Article 32 do not, however, constitute a direct guarantee by the Government of the Bank’s obligations under the debt securities or the guarantees, and the provisions of the KDB Act, including Article 32, may be amended at any time by action of the National Assembly.

The Government closely supervises the Bank’s operations in the following ways:

- the Government has the power to elect or dismiss the Bank’s Chairman and Chief Executive Officer, members of its Board of Directors and Auditor;
- within three months after the end of each fiscal year, the Bank must submit its financial statements for the fiscal year to the Financial Services Commission;
- the Financial Services Commission has broad authority to require reports from the Bank on any matter and to examine the Bank’s books, records and other documents. On the basis of the reports and examinations, the Financial Services Commission may issue any orders deemed necessary to enforce the KDB Act;
- the Financial Services Commission must approve the Bank’s operating manual, which sets out the guidelines for all principal operating matters;
- the Financial Services Commission may supervise the Bank’s operations to ensure managerial soundness based upon the KDB Decree and the Bank Supervisory Regulations of the Financial Services Commission and may issue orders deemed necessary for such supervision; and
- the Bank may amend its Articles of Incorporation only with the approval of the Financial Services Commission.

The Bank has had its annual financial statements for years commencing 1998 audited by an external auditor. See “—Financial Statements and the Auditors”.

Pursuant to the Bank’s most recently approved programme of operations, the Bank expects to support the reform and restructuring of the Republic’s economic and industrial structure, including financing of promising small and medium sized enterprises, providing export finance and encouraging investments in infrastructure necessary to promote consumer demand and industrial reorganisation.

### **Selected Financial Statement Data**

Unless specified otherwise, the information provided below is stated on a separate basis in accordance with Korean IFRS.

### ***Consolidated Statements of Financial Position Data***

The following table presents selected statements of financial position data regarding the Bank’s assets, liabilities and shareholders’ equity on a consolidated basis as of 31 December 2021 and 2020, which have been derived from its audited consolidated financial statements as of and for the years ended 31 December 2021 and 2020.

	As of 31 December	
	2020	2021
	(billions of Won)	
Statements of Financial Position Data		
Total Loans (measured at amortised cost) <sup>(1)</sup> .....	166,336.5	182,507.3
Total Borrowings <sup>(2)</sup> .....	216,528.4	234,482.2
Total Assets .....	304,996.5	333,898.2
Total Liabilities .....	264,007.0	287,740.1
Equity .....	40,989.5	46,158.2

Notes:

- (1) Gross amount, which includes loans for facility development, loans for working capital, loans for households, inter-bank loans, private loans, off-shore loan receivables, loans borrowed from overseas financial institutions, bills bought in foreign currencies, advance payments on acceptances and guarantees and other loans without adjusting for allowance for loan losses, present value discounts and deferred loan fees.
- (2) Total Borrowings include deposits, financial liabilities measured at fair value through profit or loss, borrowings and debentures.

#### **Consolidated Income Statement Data**

The Bank's selected income statement data included in the following table have been derived from its audited consolidated financial statements as of and for the years ended 31 December 2021 and 2020.

	Year Ended 31 December	
	2020	2021
	(billions of Won)	
Income Statement Data		
Total Interest Income.....	4,876.6	4,613.0
Total Interest Expense.....	3,328.6	2,627.5
Net Interest Income.....	1,547.9	1,985.5
Operating Income.....	716.9	2,444.6
Non-operating Income.....	1,862.7	724.9
Income before Income Tax.....	2,579.6	3,169.5
Income Tax Expense.....	659.5	954.5
Net Income.....	1,961.3	1,323.5

#### **Separate Financial Statement Data**

The following tables present selected separate financial information as of and for the years ended 31 December 2021 and 2020, which has been derived from the Bank's audited separate financial statements as of and for the

years ended 31 December 2021 and 2020 and included in this Information Memorandum. You should read the following financial statement data together with the financial statements and notes included in this Information Memorandum.

	As of 31 December	
	2020	2021
	(billions of Won)	
Statements of Financial Position Data		
Total Loans (measured at amortised cost) <sup>(1)</sup> .....	159,083.6	174,917.2
Total Borrowings <sup>(2)</sup> .....	204,780.7	222,288.3
Total Assets .....	251,852.0	276,421.9
Total Liabilities .....	221,469.5	239,919.0
Equity .....	30,382.5	36,502.9

Notes:

- (1) Gross amount, which includes loans for facility development, loans for working capital, loans for households, inter-bank loans, private loans, off-shore loan receivables, loans borrowed from overseas financial institutions, bills bought in foreign currencies, advance payments on acceptances and guarantees and other loans without adjusting for allowance for loan losses, present value discounts and deferred loan fees.
- (2) Total Borrowings include deposits, financial liabilities measured at fair value through profit or loss, borrowings and debentures.

As of 31 December 2021, the Bank's total assets increased by 9.8% to ₩276,421.9 billion from ₩251,852.0 billion as of 31 December 2020, primarily due to an increase in loans measured at amortised cost to ₩170,763.4 billion as of 31 December 2021 from ₩155,300.2 billion as of 31 December 2020 and an increase in securities measured at fair value through other comprehensive income to ₩37,875.1 billion as of 31 December 2021 from ₩34,141.3 billion as of 31 December 2020, as well as an increase in investments in subsidiaries and associates to ₩28,710.1 billion as of 31 December 2021 from ₩25,553.6 billion as of 31 December 2020.

As of 31 December 2021, the Bank's total liabilities increased by 8.3% to ₩239,919.0 billion from ₩221,469.5 billion as of 31 December 2020, primarily due to an increase in debentures to ₩145,365.3 billion as of 31 December 2021 from ₩138,318.7 billion as of 31 December 2020 and an increase in deposits to ₩52,792.1 billion as of 31 December 2021 from ₩45,879.4 billion as of 31 December 2020, as well as an increase in borrowings to ₩22,063.8 billion as of 31 December 2021 from ₩18,887.6 billion as of 31 December 2020.

As of 31 December 2021, the Bank's total equity increased by 20.1% to ₩36,502.9 billion from ₩30,382.5 billion as of 31 December 2020, primarily due to an increase in accumulated other comprehensive income to ₩4,773.5 billion as of 31 December 2021 from ₩2,064.4 billion as of 31 December 2020 and an increase in the Bank's retained earnings to ₩7,363.8 billion as of 31 December 2021 from ₩5,068.0 billion as of 31 December 2020.

The Bank's selected income statement data included in the following table have been derived from its audited separate financial statements as of and for the years ended 31 December 2021 and 2020 included in this Information Memorandum.

	Year Ended 31 December	
	2020	2021
	(billions of Won)	
Income Statement Data		
Total Interest Income.....	4,441.6	4,125.3
Total Interest Expense .....	3,162.0	2,466.7
Net Interest Income .....	1,279.6	1,658.6
Operating Income.....	894.5	3,550.2
Income before Income Tax.....	620.9	3,655.4
Income Tax Expense .....	133.3	1,193.5
Net Income.....	487.5	2,461.8

## 2021

The Bank had net income of ₩2,461.8 billion in 2021 compared to ₩487.5 billion in 2020, on a separate basis. The principal factors for the increase in net income included:

- an increase in net other operating income to ₩1,738.6 billion in 2021 from ₩227.0 billion in 2020, primarily due to a change in net gain (loss) on disposal of loans measured at fair value through profit or loss to a net gain of ₩1,850.7 billion in 2021 from a net loss of ₩24.6 billion in 2020 resulting primarily from gains recognised in connection with the exercise of the Bank's right to convert the Bank's convertible bonds issued by HMM Company Limited into common shares, which took place in June 2021;
- a reversal of impairment loss on investments in subsidiaries and associates of ₩363.1 billion in 2021, primarily due to a reversal of impairment losses recognised in connection with the upcoming sale of the Bank's stake in Daewoo Engineering & Construction, compared to an impairment loss on investments in subsidiaries and associates of ₩239.5 billion in 2020; and
- an increase in dividend income to ₩1,259.6 billion in 2021 from ₩670.6 billion in 2020, primarily due to an increase in dividends received from Korea Electric Power Corporation during 2021 compared to 2020.

The above factors were partially offset by an increase in income tax expense to ₩1,193.5 billion in 2021 from ₩133.3 billion in 2020, primarily due to an increase in income before income tax to ₩3,655.4 billion in 2021 from ₩620.9 billion in 2020.

## 2020

The Bank had net income of ₩487.5 billion in 2020 compared to ₩445.7 billion in 2019, on a separate basis. The principal factors for the increase in net income included:

- net other operating income of ₩227.0 billion in 2020 compared to net other operating expense of ₩341.7 billion in 2019, primarily due to an increase in net gain on valuation of loans measured at fair value through profit or loss to ₩649.3 billion in 2020 from ₩42.9 billion in 2019;

- a net gain on derivatives of ₩397.2 billion in 2020 compared to a net loss on derivatives of ₩8.3 billion in 2019, primarily due to a decrease in net loss on fair value hedged items resulting from fluctuations in interest rates, foreign exchange rates and the prices of stocks and derivatives;
- a decrease in impairment loss on investments in subsidiaries and associates to ₩239.5 billion in 2020 from ₩542.9 billion in 2019, primarily due to a decrease in impairment losses recognised in connection with the Bank's holdings of equity interest in Daewoo Shipbuilding & Marine Engineering Co., Ltd., or DSME, and GM Korea; and
- an increase in net interest income to ₩1,279.6 billion in 2020 from ₩1,062.3 billion in 2019, primarily due to a decrease in interest expense to ₩3,162.0 billion in 2020 from ₩4,038.9 billion in 2019, which outpaced the decrease in interest income to ₩4,441.6 billion in 2020 from ₩5,101.2 billion in 2019.

The above factors were partially offset by an increase in provision for loan loss allowance to ₩1,177.0 billion in 2020 from ₩59.8 billion in 2019, primarily due to an increase in expected credit losses in anticipation of a deterioration in the overall asset quality of the Bank's loan portfolio due to the ongoing COVID-19 pandemic.

### ***Allowances for Loan Losses and Loans in Arrears***

The Bank establishes allowances for losses from problem loans, including guarantees and other extensions of credit, based on the length of the delinquent periods and the nature of the loans, including guarantees and other extensions of credit. Under K-IFRS 1109, for annual periods commencing on or after 1 January 2018, the Bank establishes allowances for credit losses based on expected credit losses instead of incurred losses (as was the case under K-IFRS 1039) by assessing changes in expected credit losses and recognising such changes as impairment loss (or reversal of impairment loss) in profit or loss. Under K-IFRS 1109, the allowance required to be established with respect to a loan or receivable is the amount of the expected 12-month credit loss or the expected lifetime credit loss for the applicable loan or receivable, according to three stages of credit risk deterioration since initial recognition.

As of 31 December 2021, the Bank established allowances of ₩4,154.3 billion for loan losses, which was 10.0% higher than the allowances as of 31 December 2020 of ₩3,776.5 billion, primarily due to an increase in expected credit losses in anticipation of a deterioration in the overall asset quality of the Bank's loan portfolio due to the ongoing COVID-19 pandemic. Allowances for loan losses under K-IFRS are recorded for loans based on expected credit losses, depending on whether there has been a significant increase in credit risk or a credit impairment since initial recognition and, if the Bank's allowances for loan losses are deemed insufficient for regulatory purposes, the Bank compensates for the difference by recording a regulatory reserve for loan losses within retained earnings. See “—Financial Statements and the Auditors—Notes to Separate Financial Statements of 31 December 2021 and 2020—Notes 3(27), 9(1), 24(4) and 24(5).”

Certain of the Bank's customers have restructured loans with their creditor banks. As of 31 December 2021, the Bank has provided loans of ₩853.1 billion for companies under workout, court receivership, court mediation and other restructuring procedures. As of 31 December 2021, the Bank had established allowances of ₩375.2 billion for loan losses with respect to such companies. The Bank cannot assure you that actual results of the credit loss from the loans to these customers will not exceed the allowances established.

The following table provides information on the Bank's loan loss allowances.

		As of 31 December 2020 <sup>(1)</sup>		As of 31 December 2021 <sup>(1)</sup>	
		Loan Amount	Loan Loss Allowances	Loan Amount	Loan Loss Allowances
		<i>(billions of Won)</i>			
Loan Classification .....	Normal <sup>(2)</sup>	₩152,753.7	₩1,200.7	₩169,518.3	₩2,045.2
	Precautionary	3,300.8	805.6	3,182.5	901.2
	Substandard	1,880.7	936.5	1,326.4	542.1
	Doubtful	285.7	218.0	148.9	119.2
	Expected Loss	862.7	615.7	741.1	546.6
	Total	₩159,083.6	₩3,776.5	₩174,917.2	₩4,154.3

Notes:

- (1) These figures include loans for facility development, loans for working capital, loans for households, inter-bank loans, private loans, off-shore loan receivables, loans borrowed from overseas financial institutions, bills bought in foreign currencies, advance payments on acceptances and guarantees and other loans.
- (2) Includes loans guaranteed by the Government. Under Korean IFRS, the Bank establishes loan loss allowances for all loans including loans guaranteed by the Government.

As of 31 December 2021, the Bank's non-performing loans totalled ₩2,216.4 billion, representing 1.3% of its outstanding loans as of such date. Non-performing loans are defined as loans that are classified as substandard or below. On 31 December 2021, the Bank's legal reserve was ₩1,551.2 billion, representing 0.9% of its outstanding loans as of such date.

#### ***Loans to Financially Troubled Companies***

The Bank has credit exposure (including loans, guarantees and equity investments) to a number of financially troubled Korean companies including DSME, HMM Company Limited (formerly, Hyundai Merchant Marine Co., Ltd.), HJ Shipbuilding & Construction Co., Ltd. (formerly, Hanjin Heavy Industries and Construction Co., Ltd.), Daehan Shipbuilding Co., Ltd., K Shipbuilding Co., Ltd. (formerly, STX Offshore & Shipbuilding), KG Dongbu Steel Co., Ltd., Doosan Enerbility Co., Ltd. (formerly, Doosan Heavy Industries & Construction Co., Ltd.) and GM Korea Company. As of 31 December 2021, the Bank's credit extended to these companies totalled ₩21,071.2 billion, accounting for 7.6% of the Bank's total assets as of such date.

The following table provides the loan amounts (including loans classified as substandard or below and equity investment classified as estimated loss or below) extended to these companies as of the dates indicated:

Company	As of 31 December		Primary Reason for Change
	2020	2021	
	<i>(billions of Won)</i>		
DSME .....	₩4,463.1	₩6,016.3	Increase due to an increase in refund guarantees
HMM Company Limited.....	4,771.5	10,452.0	Increase due to an increase in the value of perpetual bonds and conversion of convertible bonds into stocks

Company	As of 31 December		Primary Reason for Change
	2020	2021	
	<i>(billions of Won)</i>		
HJ Shipbuilding & Construction ..	927.2	854.0	Decrease due to sales of stocks and a decrease in guarantees
Daehan Shipbuilding .....	1,047.4	1,226.6	Increase due to an increase in refund guarantees
K Shipbuilding .....	531.3	394.6	Decrease due to conversion of loans into stocks and repayment of loans
KG Dongbu Steel .....	695.9	825.5	Increase due to an increase in loans
Doosan Enerbility .....	1,644.2	899.3	Decrease due to a decrease in loans
GM Korea Company .....	436.9	402.9	Decrease due to a decline in the value of stocks
Total .....	<u>₩15,205.7</u>	<u>₩21,071.2</u>	

As of 31 December 2021, the Bank established allowances of ₩701.8 billion for the Bank's exposure to DSME, ₩17.6 billion for HMM Company Limited, ₩26.3 billion for HJ Shipbuilding & Construction, ₩488.5 billion for Daehan Shipbuilding, ₩30.2 billion for K Shipbuilding, ₩4.1 billion for KG Dongbu Steel, ₩7.5 billion for Doosan Enerbility and none for GM Korea Company.

During 2015, DSME, one of the largest shipbuilding and offshore construction companies in Korea, suffered from financial difficulties primarily due to significant losses incurred in connection with the construction of offshore plants resulting from a prolonged slowdown in the global shipbuilding industry. In October 2015, the Bank announced that the Bank, along with The Export-Import Bank of Korea, would extend additional financing of up to ₩4.2 trillion to DSME by the end of 2016 in the form of debt-to-equity swaps, extension of additional loans and provision of other forms of liquidity support. In this connection, in December 2015, the Bank acquired ₩382.9 billion of new equity shares of DSME, which increased the Bank's equity interest in DSME from 31.5% to 49.7%, and the Bank became its largest shareholder. In December 2016, the Bank increased the Bank's equity interest in DSME to 79.0% through an additional debt for equity swap. In March 2017, the Bank and The Export-Import Bank of Korea announced a second joint plan to provide an additional ₩2.9 trillion in financial support to DSME, which was approved by the other creditors in April 2017. Based on such plan, the Bank provided additional debt-to-equity swaps of ₩0.3 trillion in June 2017 and The Export-Import Bank of Korea exchanged a term loan in the amount of ₩1.28 trillion provided by it to DSME for perpetual bonds issued by DSME. Other creditors also provided debt-to-equity swaps for up to 80% of their debt with DSME and rescheduled the maturities of the remainder. Subsequently, in March 2019, Hyundai Heavy Industries entered into a definitive agreement with the Bank to acquire DSME. Pursuant to such agreement, the Bank plans to transfer all the Bank's shares in DSME amounting to approximately ₩2 trillion (in the form of contributions-in-kind) to Korea Shipbuilding & Offshore Engineering, a newly established subholding company spun off from Hyundai Heavy Industries to control its shipbuilding companies, in return for an equity stake in Korea Shipbuilding & Offshore Engineering. However, in January 2022, the European Commission announced that it would not grant approval for such acquisition due to anti-competition concerns for LNG carriers, and the consummation of the acquisition currently remains uncertain.

In July 2016, HMM Company Limited executed a debt-to-equity swap with the Bank and other creditors, as part of its continued restructuring led by the Bank as its largest creditor, and affiliates of the Hyundai group

reduced their shareholdings in HMM Company Limited, which resulted in the Bank becoming the largest shareholder of HMM Company Limited. In October 2018, the Bank injected ₩1 trillion in emergency aid into HMM Company Limited in order to normalise its operations by purchasing bonds with warrants and convertible bonds issued by HMM Company Limited. In June 2021, the Bank exercised its right to convert ₩300 billion of its convertible bonds into 60 million common shares of HMM Company Limited. The Bank has since terminated the joint management of HMM Company Limited with Korea Ocean Business Corporation following an improvement in the financial performance of HMM Company Limited, and are currently considering the sale of the Bank's equity stake in HMM Company Limited, which amounted to 20.7% as of 31 December 2021.

In January 2019, HJ Shipbuilding & Construction Philippines, a subsidiary of HJ Shipbuilding & Construction at Subic Bay in the Philippines, declared bankruptcy and filed for corporate rehabilitation with a regional trial court following its failure to comply with loan obligations to its Philippine lenders. In March 2019, creditors in Korea (including the Bank) and lenders in the Philippines agreed on, and executed, a business normalisation plan including a debt-to-equity swap and capital reduction for HJ Shipbuilding & Construction, as a result of which the Bank became the largest shareholder of HJ Shipbuilding & Construction. In September 2021, creditors of HJ Shipbuilding & Construction (including the Bank) sold a 66.85% interest in the company to a consortium led by Dongbu Corporation.

K Shipbuilding has faced financial difficulties for the past several years due to prolonged slowdowns in the Korean shipbuilding and shipping industries. K Shipbuilding, which had filed for court receivership in May 2016 and executed debt-to-equity swaps with their creditors (including the Bank) in December 2016 under a rehabilitation plan through which the Bank increased its equity interest to 43.9% and became its largest shareholder, exited court receivership in July 2017. In November 2020, the Bank selected a consortium consisting of KH Investment and UAMCO., Ltd. as the preferred bidder for the sale of shares of K Shipbuilding. In July 2021, the consortium acquired a 97% interest in K Shipbuilding for ₩250 billion. In December 2021, the Bank terminated its creditor management of K Shipbuilding, and as of 31 December 2021, the Bank's equity interest in K Shipbuilding amounted to 2.6%.

Dongbu Steel has also been facing financial difficulties for the past several years due to the prolonged slowdown in the Korean construction industry and in the Korean economy in general. Dongbu Steel entered into a voluntary workout agreement with its creditors, including the Bank, in October 2015. Such agreement expired in September 2019 when KG Steel, a subsidiary of KG Group established in May 2019, became the largest shareholder of Dongbu Steel, which was subsequently re-named to KG Dongbu Steel. As of 31 December 2021, the Bank's equity interest in KG Dongbu Steel amounted to 1.5%.

Doosan Enerbility has also faced financial difficulties due to the prolonged slowdown in the Korean heavy and construction industries and in the Korean economy in general, as well as the Government's initiative to support clean and renewable energy sources while phasing out nuclear and coal-fired plants in recent years. Doosan Enerbility submitted a self-rescue plan to its creditors, including the Bank, and the Bank agreed to provide Doosan Enerbility with loans amounting to ₩500 billion, ₩400 billion and ₩600 billion in March, April and June 2020, respectively. In August 2021, as part of the self-rescue plan, a consortium comprised of Hyundai Heavy Industries Holdings Co. and KDB Investment, the Bank's investment unit, purchased a 35.0% equity interest in Doosan Infracore from Doosan Enerbility for ₩850 billion, and subsequently renamed the company as Hyundai Doosan Infracore Co., Ltd. In March 2022, Doosan Enerbility repaid its outstanding loans to its creditors, including the Bank, and exited the debt restructuring programme.

In 2020, the Bank sold non-performing loans worth ₩314.5 billion to UAMCO., Ltd.

The Bank's large exposure to financially troubled companies in Korea means that the Bank is also exposed to financial difficulties experienced by the Bank's borrowers as a result of, among other things, adverse economic

conditions in Korea and globally, which could disrupt the business, activities and operations of many of the Bank's borrowers, which in turn could have an adverse impact on the ability of the Bank's borrowers to meet existing payment or other obligations to the Bank. For example, COVID-19, an infectious disease that was first reported to have been transmitted to humans in late 2019 and was declared a "pandemic" by the World Health Organization in March 2020, has spread globally over the course of 2020, 2021 and 2022 to date and has led to significant global and domestic economic and financial disruptions. See "The Republic of Korea—The Economy—Worldwide Economic and Financial Difficulties". The COVID-19 pandemic has had an especially direct negative impact on certain of the Bank's borrowers, among them the airline industry, which has been in significant need of liquidity following a sharp decline in aircraft traffic and a dramatic increase in the number of suspended flights due to entry restrictions imposed by many countries in response to COVID-19 throughout 2020, 2021 and 2022 to date.

In May 2020, the Bank injected ₩720 billion (consisting of ₩420 billion in securities collateralised by income receivables, ₩180 billion in perpetual bonds and ₩120 billion in loans) into Korean Air Lines Co., Ltd., a subsidiary of Hanjin Group and Korea's largest airline and flagship carrier, in order to provide liquidity support. As of 31 December 2021 and 2020, the Bank's loan amounts (including loans classified as substandard or below and equity investment classified as estimated loss or below) extended to Korean Air Lines amounted to ₩1,167.2 billion and ₩1,374.5 billion, respectively.

In April 2020, the Bank provided Asiana Airlines, a subsidiary of Kumho Asiana Group and the second-largest airline in Korea, with liquidity support by providing a credit line in the amount of ₩1.2 trillion. The Bank's decision to take such measure was largely driven by a need to address Asiana Airlines' financial difficulties resulting from the negative impact of the COVID-19 pandemic on the airline industry. In September 2020, the Bank decided to inject ₩2.4 trillion from the Key Industry Stabilization Fund (explained further below) into Asiana Airlines in order to normalise its operations following the cancellation of plans by a consortium led by HDC Hyundai Development to acquire Asiana Airlines. Subsequently, in November 2020, the Bank signed an investment agreement with Hanjin KAL, the parent company of Korean Air, to inject ₩800 billion (consisting of ₩500 billion through participation in a rights offering and ₩300 billion through purchase of exchangeable bonds) into Hanjin KAL in connection with Korean Air's acquisition of a 63.9% stake in Asiana Airlines through a transaction valued at ₩1.8 trillion (the "Acquisition"), subsequent to which the Bank expects the Bank's equity interest in Hanjin KAL to amount to approximately 10.7%. In December 2020, Asiana Airlines' shareholders approved a 3-to-1 share capital reduction plan, which was aimed at offsetting part of Asiana Airlines' deficits in preparation for the Acquisition. However, the consummation of the Acquisition currently remains subject to a number of factors, including uncertainties regarding opposition to the Acquisition by labour unions of Korean Air Lines and Asiana Airlines, and approval of the Acquisition from antitrust authorities of a number of jurisdictions, including the United States, the European Union, China, Japan and Vietnam, which have yet to be obtained. If the Acquisition is completed, Asiana Airlines would become Korean Air Lines' consolidated subsidiary. In June 2021, the Bank approved an integration plan pursuant to which Korean Air Lines would merge with Asiana Airlines by 2024.

In addition, the ongoing COVID-19 pandemic has prompted the Government in 2020, 2021 and 2022 to date to implement various emergency aid initiatives involving Korean banks, including the Bank, to provide liquidity assistance to a range of financially troubled companies. Such initiatives include, among others, the provision of new loans provided to financially troubled companies, extension of maturity dates for existing loans and suspension of interest payment obligations for an extended period of time. Most recently, in May 2020, the Government provided for the establishment of the Key Industry Stabilization Fund, a fund amounting to ₩40 trillion to be administered by the Bank mainly through the issuance of industrial finance bonds, to support businesses in certain key industries that face financial difficulties resulting from the ongoing COVID-19 pandemic, such as the air transport and maritime industries. The Key Industry Stabilization Fund has supported those businesses that meet certain pre-determined criteria, including those aimed at stabilising the job markets.

The Bank's participation in such Government-led initiatives may lead the Bank to extend credit to financially troubled borrowers that the Bank would not otherwise extend, or offer terms for such credit that the Bank would not otherwise offer, in the absence of such initiatives. Furthermore, there is no guarantee that the financial condition and liquidity position of the Bank's financially troubled borrowers benefiting from such initiatives will improve sufficiently for them to service their debt on a timely basis, or at all. Accordingly, increases in the Bank's exposure to financially troubled borrowers resulting from such Government-led initiatives may have a material adverse effect on the Bank's financial condition and results of operations.

A deterioration in the financial condition of the Bank's borrowers, including those described above as well as other companies under workout, court receivership, court mediation and other restructuring procedures, could result in a deterioration in the quality of the Bank's loan portfolio. This, in turn, could result in an increase in delinquency ratios, increased charge-offs and higher provisioning, as well as an increase in impairment losses on such loans, particularly if businesses remain closed, the impact of the COVID-19 pandemic on the global economy worsens, or more of the Bank's borrowers draw on their lines of credit or seek additional loans from the Bank to help finance their business, which could have a material adverse impact on the Bank's business, financial condition or results of operations.

## **Operations**

### ***Loan Operations***

The Bank mainly provides equipment capital loans, project loans and working capital loans to private Korean enterprises that undertake major industrial projects either directly or indirectly through on-lending. The loans generally cover over 50%, and in some cases as much as 100%, of the total project cost. Equipment capital loans include loans to major industries for development of high technology and for acquisition, improvement or repair of machinery and equipment. The Bank disburses loan proceeds in instalments to ensure that the borrower uses the loan for its intended purpose.

Before approving a loan, the Bank considers:

- the economic benefits of the project to the Republic;
- the extent to which the project serves priorities established by the Government's industrial policy;
- the project's operational feasibility;
- the loan's and the project's profitability; and
- the quality of the borrower's management.

The interest rate the Bank charges on the Bank's loans varies based on a number of factors, including the purpose of the loan, maturity date and the borrower's credit ratings. Certain loans bear interest at below market rates. Equipment capital loans generally have original maturities of three to five years, although the Bank occasionally makes equipment capital loans with longer maturities. Working capital loans usually mature within two years.

The Business Planning Department functions as the Bank's centralised policy-making and planning division with respect to the Bank's lending activities. The Business Planning Department formulates and revises the Bank's internal regulations on loan programmes as well as setting basic lending guidelines.

The Bank has multiple levels of loan approval authority, depending on the loan amount and other factors such as the availability of collateral or guarantee, debt repayment ability and business prospects. The Credit Review Committee, Division Credit Review Committee, Division Credit Review Sub-Committee, General Manager

each has authority to approve loans up to a specified amount. The amount differs depending on the type of loan and certain other factors, for example, whether a loan is collateralised or guaranteed.

In 2020, 2021 and 2022 to date, many of the Bank's corporate borrowers have experienced financial difficulties due to the ongoing COVID-19 pandemic. See "The Republic of Korea—The Economy—Worldwide Economic and Financial Difficulties". The Bank has significant exposure to certain industries particularly affected by the ongoing outbreak of the COVID-19 pandemic, such as the transportation (including airlines), hotel and leisure industries, the banking and insurance industries, the retail and wholesale industries and the manufacturing industry, among others. In the event that the financial condition of these companies to which the Bank extended credits deteriorates in the future, the Bank may be required to record additional allowances for loan losses, as well as charge-offs and impairment losses or losses on disposal, which may have a material adverse impact on the Bank's results of operations and financial condition.

The Bank's overall risk management policy is set by the Risk Management Committee. For detailed information regarding our risk management policy and procedures, see "—Financial Statements and Auditors—Notes to Separate Financial Statements of December 31, 2021 and 2020—Note 49."

The following table sets out, by currency and category of loan, the Bank's total outstanding loans:

	<b>31 December</b>	
	<b>2020</b>	<b>2021</b>
	<i>(billions of Won)</i>	
<b>Loans<sup>(1)</sup></b>		
Equipment Capital Loans:		
Domestic Currency .....	₩51,237.3	₩56,414.4
Foreign Currency .....	7,789.1	10,088.7
	59,026.4	66,503.1
Working Capital Loans:		
Domestic Currency <sup>(2)</sup> .....	63,949.1	65,120.5
Foreign Currency .....	9,270.2	11,967.5
	73,219.3	77,088.0
Other Loans <sup>(3)</sup> .....	26,837.9	31,326.1
Total Loans.....	₩159,083.6	₩174,917.2

Notes:

(1) Includes loans extended to affiliates.

(2) Includes loans on households.

(3) Includes inter-bank loans, private loans, off-shore loan receivables, loans borrowed from overseas financial institutions, bills bought in foreign currencies, advance payments on acceptances and guarantees and other loans.

As of 31 December 2021, the Bank had ₩174,917.2 billion in outstanding loans, which represents a 10.0% increase from ₩159,083.6 billion of outstanding loans as of 31 December 2020.

### *Maturities of Outstanding Loans*

The following table categorises the Bank's outstanding equipment capital and working capital loans by their remaining maturities:

#### **Outstanding Equipment Capital and Working Capital Loans by Remaining Maturities<sup>(1)</sup>**

	<b>31 December</b>		<b>As % of 31</b>
	<b>2020</b>	<b>2021</b>	<b>December</b>
			<b>2021 Total</b>
	<i>(billions of Won, except percentages)</i>		
Loans with Remaining Maturities of One Year or Less ...	₩58,273.9	₩59,416.3	₩41.4%
Loans with Remaining Maturities of More Than One			
Year .....	73,971.8	84,174.8	58.6
Total .....	₩132,245.7	₩143,591.1	100.0%

Note:

(1) Includes loans extended to affiliates.

### *Loans by Industrial Sector*

The following table sets out the total amount of the Bank's outstanding equipment capital and working capital loans, categorised by industry sector:

#### **Outstanding Equipment Capital and Working Capital Loans by Industry Sector<sup>(1)</sup>**

	<b>31 December</b>		<b>As % of 31</b>
	<b>2020</b>	<b>2021</b>	<b>December</b>
			<b>2021 Total</b>
	<i>(billions of Won, except percentages)</i>		
Manufacturing.....	₩62,964.5	₩65,421.6	45.6%
Banking and Insurance .....	30,478.6	33,979.3	23.7
Transportation .....	10,034.6	10,348.8	7.2
Public Administration .....	590.9	626.9	0.4
Electric, Gas and Water Supply Industry .....	3,784.4	5,211.4	3.6
Others <sup>(2)</sup> .....	24,392.8	28,003.2	19.5
Total .....	₩132,245.7	₩143,591.1	100.0%
Percentage increase (decrease) from previous period .....	15.0%	8.6%	

Notes:

(1) Includes loans extended to affiliates.

(2) Includes wholesale and retail trade, real estate and leasing, and construction.

The manufacturing sector accounted for 45.6% of the Bank's outstanding equipment capital and working capital loans as of 31 December 2021. As of 31 December 2021, loans to the transportation equipment manufacturing businesses and the metal product manufacturing businesses accounted for 10.6% and 9.6%, respectively, of the Bank's outstanding equipment capital and working capital loans to the manufacturing sector.

Industrial Bank of Korea was the Bank's single largest borrower as of 31 December 2021, accounting for 4.8% of the Bank's outstanding equipment capital and working capital loans. As of 31 December 2021, the Bank's five largest borrowers and 20 largest borrowers accounted for 12.2% and 23.4%, respectively, of the Bank's outstanding equipment capital and working capital loans.

The following table breaks down the equipment capital and working capital loans to the Bank's 20 largest borrowers outstanding as of 31 December 2021 by industry sector:

#### 20 Largest Borrowers by Industry Sector

	As % of 31 December 2021 Total Outstanding Equipment Capital and Working Capital Loans to the Bank's 20 Largest Borrowers
Manufacturing.....	27.5%
Banking and Insurance.....	50.5
Transportation .....	11.5
Electric, Gas and Water Supply Industry .....	3.5
Others <sup>(1)</sup> .....	7.0
Total .....	100.0%

Note:

(1) Includes wholesale and retail trade, real estate and leasing, and construction.

The following table categorises the new loans made by the Bank by industry sector:

#### New Loans by Industry Sector

	Year Ended 31 December		As % of Year Ended 31 December 2021 Total
	2020	2021	
	<i>(billions of Won, except percentages)</i>		
Manufacturing.....	₩39,368.4	₩42,998.5	53.2%
Banking and Insurance.....	10,404.0	13,582.3	16.8
Transportation .....	3,856.2	3,768.8	4.7
Electric, Gas and Water Supply Industry .....	2,330.3	3,474.6	4.3
Public Administration .....	181.0	319.9	0.4
Others <sup>(1)</sup> .....	15,118.6	16,645.0	20.6

	Year Ended 31 December		As % of Year
	2020	2021	Ended 31 December
	(billions of Won, except percentages)		2021 Total
Total .....	₩71,258.5	₩80,789.1	100.0%
Percentage increase (decrease) from previous period .....	18.6%	13.4%	

Note:

(1) Includes wholesale and retail trade, real estate and leasing, and construction.

### Loans by Categories

In addition to dividing its loans into equipment capital and working capital loans, the Bank classifies loans into several groupings, the most important being:

- industrial fund loans;
- on-lending loans;
- foreign currency loans;
- local currency loans denominated in foreign currencies;
- offshore loans in foreign countries; and
- government fund loans.

The following table sets out equipment capital and working capital loans by categories as of 31 December 2021:

	Equipment Capital Loans <sup>(1)</sup>		Working Capital Loans <sup>(1)</sup>	
	31 December 2021	%	31 December 2021	%
	(billions of Won, except percentages)			
Industrial fund loans .....	₩51,130.0	76.9%	₩49,072.8	63.7%
On-lending loans.....	2,841.5	4.3	15,191.7	19.7
Foreign currency loans .....	6,906.6	10.4	1,556.1	2.0
Local currency loans denominated in foreign currencies .....	1.1	0.0	25.4	0.0
Offshore loans in foreign currencies.....	2,863.5	4.3	8,718.7	11.3
Government fund loans.....	107.7	0.2	0.0	0.0
Overdraft .....	0.0	0.0	98.4	0.1
Others <sup>(1)</sup> .....	2,652.8	4.0	2,424.9	3.1
Total.....	₩66,503.1	100.0%	₩77,088.0	100.0%

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Note:

- (1) Includes loans on households and loans extended to affiliates.

### ***Industrial Fund Loans***

Industrial fund loans are equipment capital and working capital loans denominated in Won to borrowers in major industries to finance equipment and facilities.

The Bank currently makes equipment capital industrial fund loans at floating or fixed rates for terms of up to 10 years and for up to 100% of the equipment cost being financed. The Bank makes working capital industrial fund loans at floating or fixed rates and in amounts constituting up to 40% of the borrower's estimated annual sales.

### ***On-lending Loans***

On-lending is a form of indirect financing that involves intermediary financial institutions which on-lend the funds provided by the Bank to industrial borrowers and are responsible for repayment to the Bank. Most of the funds provided by the Bank through on-lending are ultimately lent to small- and medium-sized enterprises for their equipment purchases and working capital. The Bank explicitly sets detailed guidelines (including scope of borrowers, maturity and interest rates) for intermediary financial institutions to be followed when on-lending to the ultimate borrowers. The Bank monitors its exposure to, and the credit standing of, each financial institution to which the Bank lends. Borrowers do not apply directly to the Bank and may only apply for the Bank's on-lending loans through their regular bank or another bank of their choice. The intermediary bank appraises the financial and business situation of the applicant and generally assumes liability for repayment to the Bank. Although the processing of individual loans requires two formally separate loan approvals for each borrower, first by the intermediary bank and then by the Bank, the ultimate borrower need only apply to the intermediary bank for approval.

### ***Foreign Currency Loans***

The Bank extends loans denominated in U.S. dollars, Japanese Yen or other foreign currencies principally to finance the purchase of industrial equipment from abroad or the implementation of overseas industrial development projects by Korean companies. The Bank makes these loans at floating interest rates with original maturities, in the case of equipment capital foreign currency loans, of up to 10 years and, in the case of working capital foreign currency loans, of up to three years.

### ***Local Currency Loans Denominated in Foreign Currencies***

The Bank makes local currency loans denominated in foreign currencies for the same purposes, and to the same borrowers, as foreign currency loans. Although the Bank denominates the loans in foreign currency, the borrower receives and repays the loans in Won based on foreign exchange rates at the time of receipt and repayment. The Bank currently makes loans of this type at floating interest rates, with original maturities, in the case of equipment capital loans, of up to 10 years and, in the case of working capital loans, of up to three years.

### ***Offshore Loans in Foreign Currencies***

The Bank extends offshore loans in foreign currencies to finance:

- the purchase of industrial equipment and the implementation of overseas industrial projects by overseas subsidiaries and branches of Korean companies; and
- the overseas industrial development projects of foreign government entities, international organisations and foreign companies.

The Bank makes these loans at floating interest rates with original maturities, in the form of equipment capital foreign currency loans, of up to 10 years and, working capital foreign currency loans, of up to three years.

### ***Government Fund Loans***

The Bank makes government fund loans primarily to finance:

- water supply and drainage facilities;
- the Seoul subway system;
- freight terminal facilities;
- hospitals; and
- other facilities.

Government fund loans that are equipment capital loans require approval by the appropriate Government ministry. The Bank currently makes government fund loans in Won at floating interest rates with original maturities of 10 to 20 years.

### ***Other Loans***

The Bank also makes special purpose fund loans for particular industries or projects using funds lent to the Bank by the Government and foreign financial institutions. The Government funds that finance these loans include, among others:

- the Tourism Promotion Fund (hotel and resort projects);
- the Rational Use of Energy Fund (energy conservation projects and collective energy supply projects); and
- the Small- and Medium-sized Enterprises Promotion Fund (small- and medium-sized enterprises).

For further information relating to such loans, see “—Sources of Funds”.

### ***Guarantee Operations***

The Bank extends guarantees to its clients to facilitate their other borrowings and to finance major industrial projects. The Bank guarantees Won-denominated corporate debentures, local currency loans, and other Won liabilities and foreign currency loans from domestic and overseas Korean financial institutions and from foreign institutions. The KDB Act and the Bank’s Articles of Incorporation limit the aggregate amount of its industrial finance bond obligations and guarantee obligations. See “—Sources of Funds”.

The Bank generally obtains collateral valued in excess of the original guarantee. The Bank appraises the value of its collateral at least once a year. Depending on the borrower, the collateral may be industrial plants, real estate and/or marketable securities.

The following table shows the Bank’s outstanding guarantees:

<b>Guarantees Outstanding</b>		
	<b>As of 31 December</b>	
	<b>2020</b>	<b>2021</b>
	<i>(billions of Won)</i>	
Acceptances .....	₩408.2	₩276.0

	As of 31 December	
	2020	2021
	<i>(billions of Won)</i>	
Guarantees on local borrowing .....	1,001.3	896.9
Guarantees on foreign borrowing .....	5,510.8	6,538.5
Letter of guarantee for importers .....	43.0	37.3
Total .....	<u>₩6,963.3</u>	<u>₩7,748.8</u>

### **Investments**

The Bank invests in a range of Korean private and Government-owned enterprises but the Bank will not take a controlling interest in a company unless the acquisition is necessary for the corporate restructuring of the company. Although generally a long-term investor, the Bank sells investments from time to time. In recent years, sales resulted principally from the Government's privatisation programme, and the Bank expects to continue such sales in the future. The Government plans to sell its direct or indirect interest in certain private sector companies acquired during previous restructuring programmes, including Daewoo Engineering & Construction Co., Ltd., depending on market conditions. In accordance with such plan, the Bank expects to sell its equity holdings in certain private sector companies if favourable opportunities for sale arise. The Bank's equity investments increased to ₩41,998.7 billion as of 31 December 2021 from ₩38,227.6 billion as of 31 December 2020.

The KDB Act and the Bank's Articles of Incorporation provide that the cost basis of the Bank's total equity investments may not exceed twice the sum of the Bank's paid-in capital and the Bank's reserve from profit. In addition, pursuant to the KDB Decree, the Bank may not acquire equity securities of a single company in excess of 15% of its entire voting shares. The 15% limit, however, does not apply to certain investments, including those in Government-controlled companies financed by capital contributions from the Government. As of 31 December 2021, the cost basis of the Bank's equity investments subject to restriction under the KDB Act and its Articles of Incorporation totalled ₩19,494.0 billion, equal to 40.7% of the Bank's equity investment ceiling. For a discussion of Korean accounting principles relating to the Bank's equity investments, see "—Financial Statements and the Auditors".

The following table sets out the Bank's equity investments by industry sector on a book value basis as of 31 December 2021:

	Book Value as of 31 December 2021
	<i>(billions of Won)</i>
<b>Equity Investments</b>	
Electric, Gas and Water Supply Industry .....	₩18,019.8
Construction .....	1,004.7
Banking and Insurance .....	11,899.0
Real Estate Business .....	3,776.5
Manufacturing .....	656.9
Transportation and Communication .....	4,906.8

**Book Value as of 31  
December 2021**

*(billions of Won)*

Others .....	1,735.0
Total .....	<u><u>₩41,998.7</u></u>

As of 31 December 2021, the Bank held total equity investments, on a book value basis, of ₩591.3 billion in one of its five largest borrowers and ₩1,962.3 billion in two of its 20 largest borrowers. The Bank has not established a policy addressing loans to enterprises in which the Bank holds equity interests or equity interests in enterprises to which the Bank has extended loans.

When possible, the Bank uses the prevailing market price of a security to determine the value of its interest. However, if no readily ascertainable market value exists for its holdings, the Bank records these investments at the cost of acquisition. With respect to the Bank's equity interests in enterprises in which the Bank holds more than 15% of interest, the Bank values these investments annually, with certain exceptions, on a net asset value basis when the investee company releases its financial statements. As of 31 December 2021, the aggregate value of the Bank's equity investments accounted for approximately 90.9% of their aggregate cost basis.

As part of the Bank's investment activities, the Bank underwrites straight and convertible bond issuances in Won for domestic corporations. The Bank also invests in municipal bonds, extending funds to municipalities at subsidised interest rates, mostly to finance water supply and drainage infrastructure projects.

### ***Other Activities***

The Bank engages in a range of industrial development activities in addition to providing loans and guarantees, including:

- conducting economic and industrial research;
- performing engineering surveys;
- providing business analyses and managerial assistance; and
- offering trust services.

As of 31 December 2021, the Bank held in trust cash and other assets totalling ₩31,703.8 billion, and the Bank generated in 2021 trust fee income equalling ₩139.9 billion. As of 31 December 2020, the Bank held in trust cash and other assets totalling ₩39,896.1 billion, and the Bank generated in 2020 trust fee income equalling ₩188.9 billion. Pursuant to Korean law, the Bank segregates trust assets from its other assets; trust assets are not available to satisfy claims of its depositors or other creditors. Accordingly, the Bank accounts for its trust accounts separately from its banking accounts. However, if the Bank's trust operations fail to preserve the principal of its clients' trust assets, the Bank is responsible for covering the deficit either from previously established provisions in its trust accounts or by a transfer from its banking accounts. In 2020 and 2021, the Bank did not transfer any funds from its banking accounts to cover deficits in its trust accounts. Surplus funds generated by the trust assets may be deposited into the clients' accounts and earn interest. The Bank reflects trust fees earned by the Bank on its trust account management services as other operating revenues in the income statement of the banking accounts.

### **Sources of Funds**

In addition to its capital and reserves, the Bank obtains funds primarily from:

- borrowings from the Government;
- issuances of bonds in the domestic and international capital markets;
- borrowings from international financial institutions or foreign banks; and
- deposits.

All of the Bank's borrowings are unsecured.

### ***Borrowings from the Government***

The Bank borrows from the Government's general purpose funds and its special purpose funds. General purpose loans generally are in Won and have fixed interest rates and maturities ranging from five to 20 years. The Bank incurs special purpose loans, principally from the Tourism Promotion Fund, the Rational Use of Energy Fund and the Small- and Medium-sized Enterprises Promotion Fund, in connection with specific projects the Bank finances. The Government links the interest rate and maturity of each special purpose borrowing to the terms of the financing the Bank provides for the specific project.

The following table sets out the Bank's Government borrowings as of 31 December 2021:

<b>Type of Funds Borrowed</b>	<b>As of 31 December 2021</b>
	<i>(billions of Won)</i>
General Purpose .....	₩108.9
Special Purpose .....	4,220.9
Total .....	<u>₩4,329.8</u>

### ***Domestic and International Capital Markets***

The Bank issues industrial finance bonds both in Korea and abroad, some of which the Government directly guarantees. The Bank generally issues domestic bonds at fixed interest rates with original maturities of one to ten years.

The following table sets out the outstanding balance of the Bank's industrial finance bonds as of 31 December 2021:

<b>Outstanding Balance</b>	<b>As of 31 December 2021</b>
	<i>(billions of Won)</i>
Denominated in Won.....	₩110,989.0
Denominated in Other Currencies.....	35,986.6
Total .....	<u>₩146,975.6</u>

The KDB Act provides that the aggregate outstanding principal amount of the Bank's industrial finance bonds, other than those directly guaranteed or purchased by the Government, plus the aggregate outstanding amount of debt (including bonds and loans) guaranteed or purchased by the Bank, other than those excepted by the KDB Act, may not exceed 30 times the sum of the Bank's paid-in capital and the Bank's reserve from profit. As of 31 December 2021, the aggregate amount of the Bank's industrial finance bonds and guarantee obligations

(including guarantee obligations relating to loans that had not been borrowed as of 31 December 2021) was ₩157,092.9 billion, equal to 21.9% of the Bank's authorised amount under the KDB Act, which was ₩717,617.9 billion.

In 2021, the Bank issued ₩55.7 trillion in Won-denominated industrial finance bonds and ₩9.7 trillion in industrial finance bonds denominated in other currencies. In 2022, the Bank is targeting to issue approximately ₩55 trillion in Won-denominated industrial finance bonds and approximately ₩10 trillion in industrial finance bonds denominated in other currencies, subject to change depending on its funding needs and market conditions.

### ***Foreign Currency Borrowings***

The Bank borrows money from institutions, principally syndicates of commercial banks, outside the Republic in foreign currencies. The Bank frequently enters into related interest rate and currency swap transactions. The loans generally have original maturities of one to five years. As of 31 December 2021, the outstanding amount of the Bank's foreign currency borrowings was US\$13.9 billion.

The Bank's long-term and short-term foreign currency borrowings increased to ₩16,426.4 billion as of 31 December 2021 from ₩12,795.0 billion as of 31 December 2020.

### ***Deposits***

The Bank takes demand deposits and time and savings deposits from the general public. Time and savings deposits generally have maturities shorter than three years and bear interest at fixed rates. As of 31 December 2021, demand deposits held by the Bank totalled ₩2,294.2 billion and time and savings deposits held by the Bank totalled ₩45,453.1 billion.

### ***Debt***

#### ***Debt Repayment Schedule***

The following table sets out the Bank's principal repayment schedule as of 31 December 2021:

**Debt Principal Repayment Schedule<sup>(1)</sup>**

Currency <sup>(2)(3)</sup>	Maturing on or before 31 December				
	2022	2023	2024	2025	Thereafter
	<i>(billions of Won)</i>				
Won .....	₩54,031.2	₩30,782.3	₩15,029.9	₩4,960.0	₩10,464.0
Foreign.....	24,715.6	7,926.2	6,544.1	5,717.3	7,509.8
Total Won Equivalent.....	₩78,746.8	₩38,708.5	₩21,574.0	₩10,677.4	₩17,973.8

Notes:

- (1) Excludes bonds sold under repurchase agreements and call money.
- (2) Borrowings in foreign currencies have been translated into Won at the market average exchange rates on 31 December 2021, as announced by the Seoul Money Brokerage Services Ltd.
- (3) The Bank categorises debt with respect to which the Bank has entered into currency swap agreements by the Bank's repayment currency under such agreements.

The following table summarises, as of 31 December of the years indicated, the Bank's outstanding direct internal debt:

### Direct Internal Debt

	<i>(billions of Won)</i>
2017 .....	103,339.2
2018 .....	103,443.1
2019 .....	97,087.8
2020 .....	113,091.4
2021 .....	115,318.8

The following table summarises, as of 31 December of the years indicated, the Bank's outstanding direct external debt:

### Direct External Debt

	<i>(billions of Won)</i>
2017 .....	34,772.6
2018 .....	41,873.4
2019 .....	41,640.2
2020 .....	42,207.6
2021 .....	52,412.9

The following table sets out, by currency and the equivalent amount in U.S. dollars, the Bank's outstanding external bonds as of 31 December 2021:

### External Bonds

	<b>Amount in Original Currency</b>	<b>Equivalent Amount in U.S. Dollars<sup>(1)</sup></b>
	<i>(millions)</i>	
US\$ .....	US\$22,550.6	US\$22,550.6
Euro (EUR) .....	EUR1,410.0	1,600.4
New Zealand dollar (NZD) .....	NZD110.0	75.2
Hong Kong dollar (HKD) .....	HKD2,461.0	315.7
Chinese offshore renminbi (CNH) .....	CNH2,572.0	402.5
Swiss franc (CHF) .....	CHF800.0	874.6
Brazilian real (BRL) .....	BRL7,658.5	1,342.5
Australian dollar (AUD) .....	AUD2,530.9	1,835.4

	Amount in Original Currency	Equivalent Amount in U.S. Dollars <sup>(1)</sup>
	<i>(millions)</i>	
Great Britain Sterling (GBP).....	GBP522.0	704.1
Norwegian Krone (NOK).....	NOK400.0	45.4
Indonesian Rupiah (IDR).....	IDR3,389,800.0	237.3
Indian Rupee (INR).....	INR14,160.5	189.8
Swedish Krona (SEK).....	SEK1,410.0	156.1
Mexican Peso (MXN).....	MXN1,200.0	58.3
Thai Baht (THB).....	THB4,580.0	137.4
Total .....		<u>US\$30,525.3</u>

Note:

- (1) Amounts expressed in currencies other than US\$ are converted to US\$ at the exchange rate announced by the Seoul Money Brokerage Services, Ltd. in effect on 31 December 2021.

For further information on the Bank's outstanding indebtedness, see "—Tables and Supplementary Information".

### ***Debt Record***

The Bank has never defaulted in the payment of principal or interest on any of its obligations.

### **Overseas Operations**

The Bank operates overseas subsidiaries in Hong Kong, Dublin, Budapest, Sao Paulo, Tashkent, Jakarta and Mountain View. The subsidiaries engage in a variety of banking and merchant banking services, including:

- managing and underwriting new securities issues;
- syndicating medium and long-term loans;
- trading securities;
- trading in the money market; and
- providing investment management and advisory services.

The Bank currently maintains eleven branches in Tokyo, Shanghai, Singapore, New York City, London, Beijing, Guangzhou, Qingdao, Shenyang, Yangon and Hong Kong, and seven overseas representative offices in Frankfurt, Ho Chi Minh City, Abu Dhabi, Moscow, Sydney, Bangkok and Jakarta.

### **Property**

The Bank's head office is located at 14 Eunhaeng-ro, Yeongdeungpo-gu, Seoul, Korea, a 35,996 square metre building completed in July 2001 and owned by the Bank. In addition to the head office, the Bank maintains 61

branches in major cities throughout the Republic, including 18 in Seoul. The Bank generally leases its domestic and overseas offices under long-term leases.

### **Directors and Management; Employees**

The Bank's Board of Directors has ultimate responsibility for management of its affairs. Under the KDB Act and the Bank's Articles of Incorporation, the Bank's Board of Directors is to consist of one Chief Executive Officer (who also serves as the Chairman of the Board of Directors), one Chief Operating Officer and not more than eight directors. Under the KDB Act, the President of the Republic appoints the Bank's Chief Executive Officer and Chairman of the Board of Directors upon the recommendation of the Chairman of the Financial Services Commission. The Financial Services Commission appoints all of the Bank's directors upon the recommendation of its Chief Executive Officer. Under the Bank's Articles of Incorporation, the Bank's executive directors serve for three-year terms and they may be re-appointed, and its independent non-executive directors serve for two-year terms and they may be re-appointed; provided, however, that the Bank's independent non-executive directors shall not serve more than one year for each reappointment and shall not serve more than five years consecutively.

Currently, the members of the Bank's Board of Directors are:

<b>Position</b>	<b>Name</b>	<b>Expiration of Term</b>
Chief Executive Officer and Chairman of the Board of Directors.....	Seoghoon Kang	6 June 2025
Chief Operating Officer and Vice Chairman of the Board of Directors.....	Dae Hyon Choi	2 January 2025
Auditor .....	Tae Hyun Joo	14 March 2024
Independent Non-executive Directors .....	Yeong Ook Kim	25 May 2023
	Dong Il Jung	30 November 2023
	Han Hong Cho	27 June 2023

As of 31 December 2021, the Bank employed 3,532 persons with 2,157 persons located in its Seoul head office.

### **A. External Debt of KDB**

#### *(1) External Bonds of KDB*

<b>Currency</b>	<b>Original Principal Amount</b>	<b>Interest Rate (%)</b>	<b>Issue Date</b>	<b>Maturity Date</b>	<b>Principal Amount Outstanding as of 31 December 2021</b>
USD	300,000,000	3.000	14 September 2012	14 September 2022	300,000,000
USD	350,000,000	3.000	14 September 2012	14 September 2022	350,000,000
USD	100,000,000	3.000	14 September 2012	14 September 2022	100,000,000
USD	40,000,000	3.810	30 October 2013	30 October 2023	40,000,000
USD	30,000,000	4.000	1 November 2013	1 November 2023	30,000,000
USD	50,000,000	3.740	5 November 2013	5 November 2023	50,000,000
USD	50,000,000	3.700	6 November 2013	6 November 2023	50,000,000
USD	50,000,000	3.800	13 November 2013	13 November 2023	50,000,000
USD	30,000,000	3.790	13 November 2013	13 November 2023	30,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
USD	50,000,000	3.750	15 November 2013	15 November 2023	50,000,000
USD	30,000,000	3.680	26 November 2013	26 November 2023	30,000,000
USD	20,000,000	3.660	26 November 2013	26 November 2023	20,000,000
USD	30,000,000	3.680	26 November 2013	26 November 2023	30,000,000
USD	50,000,000	3.800	12 December 2013	12 December 2023	50,000,000
USD	20,000,000	3.800	18 December 2013	18 December 2023	20,000,000
USD	20,000,000	3.810	18 December 2013	18 December 2023	20,000,000
USD	750,000,000	3.750	22 January 2014	22 January 2024	750,000,000
USD	200,000,000	3.850	20 February 2014	20 February 2024	200,000,000
USD	20,000,000	3.720	9 April 2014	9 April 2024	20,000,000
USD	30,000,000	3.720	10 April 2014	10 April 2024	30,000,000
USD	30,000,000	3.700	11 April 2014	11 April 2024	30,000,000
USD	50,000,000	3.700	11 April 2014	11 April 2024	50,000,000
USD	30,000,000	3.605	29 April 2014	29 April 2024	30,000,000
USD	50,000,000	3.620	29 April 2014	29 April 2024	50,000,000
USD	20,000,000	3.615	30 April 2014	30 April 2024	20,000,000
USD	50,000,000	3.250	14 November 2014	14 November 2024	50,000,000
USD	50,000,000	2.730	6 February 2015	6 February 2027	50,000,000
USD	30,000,000	3.010	24 June 2015	24 June 2025	30,000,000
USD	50,000,000	3.376	9 July 2015	9 July 2025	50,000,000
USD	50,000,000	3.330	22 July 2015	22 July 2025	50,000,000
USD	50,000,000	3.200	6 August 2015	6 August 2025	50,000,000
USD	350,000,000	3.375	16 September 2015	16 September 2025	350,000,000
USD	400,000,000	3.375	16 September 2015	16 September 2025	400,000,000
USD	1,000,000,000	3.000	13 January 2016	13 January 2026	1,000,000,000
USD	50,000,000	2.690	30 March 2016	30 March 2026	50,000,000
USD	11,700,000	1.530	5 July 2016	5 July 2022*	11,700,000
USD	53,000,000	2.180	10 August 2016	10 August 2026	53,000,000
USD	500,000,000	2.000	12 September 2016	12 September 2026	500,000,000
USD	50,000,000	2.530	10 November 2016	10 November 2028	50,000,000
USD	50,000,000	3.088	17 January 2017	17 January 2027	50,000,000
USD	500,000,000	3M USD Libor+0.705	27 February 2017	27 February 2022*	500,000,000
USD	500,000,000	2.625	27 February 2017	27 February 2022*	500,000,000
USD	50,000,000	2.760	31 March 2017	31 March 2022*	50,000,000
USD	30,000,000	2.580	16 June 2017	16 June 2022*	30,000,000
USD	300,000,000	3M USD Libor+0.725	6 July 2017	6 July 2022*	300,000,000
USD	150,000,000	3M USD Libor+0.705	19 September 2017	27 February 2022*	150,000,000
USD	350,000,000	2.750	19 September 2017	19 March 2023	350,000,000
USD	300,000,000	3M USD Libor+0.8	30 October 2017	30 October 2022	300,000,000
USD	50,000,000	3.800	29 January 2018	29 January 2038	50,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
USD	20,000,000	3M USD Libor+0.6	12 February 2018	12 February 2023	20,000,000
USD	500,000,000	3.375	12 March 2018	12 March 2023	500,000,000
USD	50,000,000	4.100	19 March 2018	19 March 2048	50,000,000
USD	20,000,000	3M USD Libor+0.61	14 May 2018	14 May 2023	20,000,000
USD	500,000,000	3.000	19 February 2019	19 March 2022*	500,000,000
USD	500,000,000	3.250	19 February 2019	19 February 2024	500,000,000
USD	100,000,000	3M USD Libor+0.42	28 March 2019	28 March 2022*	100,000,000
USD	50,000,000	3M USD Libor+0.42	1 April 2019	1 April 2022*	50,000,000
USD	50,000,000	3M USD Libor+0.38	31 May 2019	31 May 2022*	50,000,000
USD	50,000,000	3M USD Libor+0.37	5 July 2019	5 July 2022*	50,000,000
USD	50,000,000	3M USD Libor+0.4	15 August 2019	15 August 2022	50,000,000
USD	100,000,000	3M USD Libor+0.41	30 August 2019	30 August 2022	100,000,000
USD	500,000,000	2.125	1 October 2019	1 October 2024	500,000,000
USD	48,000,000	3M USD Libor+0.475	1 October 2019	1 October 2022	48,000,000
USD	452,000,000	3M USD Libor+0.475	1 October 2019	1 October 2022	452,000,000
USD	50,000,000	3M USD Libor+0.405	21 October 2019	21 October 2022	50,000,000
USD	50,000,000	3M USD Libor+0.45	13 November 2019	14 November 2022	50,000,000
USD	50,000,000	3M USD Libor+0.45	14 November 2019	14 November 2022	50,000,000
USD	50,000,000	3M USD Libor+0.37	23 January 2020	24 January 2023	50,000,000
USD	30,000,000	3M USD Libor+0.35	29 January 2020	29 January 2023	30,000,000
USD	750,000,000	3M USD Libor+0.35	18 February 2020	18 February 2023	750,000,000
USD	750,000,000	1.750	18 February 2020	18 February 2025	750,000,000
USD	100,000,000	3M USD Libor+0.335	10 March 2020	10 March 2022*	100,000,000
USD	500,000,000	3M USD Libor+1.45	16 April 2020	16 April 2023	500,000,000
USD	32,000,000	3M USD Libor+1.35	22 April 2020	22 October 2025	32,000,000
USD	30,000,000	3M USD Libor+1.3	22 April 2020	22 April 2024	30,000,000
USD	50,000,000	3M USD Libor+1.3	28 April 2020	28 April 2025	50,000,000
USD	20,000,000	3M USD Libor+1.1	28 April 2020	28 April 2023	20,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
USD	40,000,000	3M USD Libor+1.25	29 April 2020	29 April 2025	40,000,000
USD	50,000,000	3M USD Libor+1.2	7 May 2020	7 May 2025	50,000,000
USD	50,000,000	3M USD Libor+1.13	15 May 2020	15 May 2025	50,000,000
USD	50,000,000	1.360	15 May 2020	15 May 2023	50,000,000
USD	58,000,000	3M USD Libor+1.13	18 May 2020	18 May 2023	58,000,000
USD	50,000,000	3M USD Libor+1	19 May 2020	27 May 2023	50,000,000
USD	15,000,000	3M USD Libor+1	26 May 2020	26 May 2023	15,000,000
USD	50,000,000	1.350	27 May 2020	27 May 2023	50,000,000
USD	500,000,000	1.250	3 June 2020	3 June 2025	500,000,000
USD	500,000,000	1.250	3 June 2020	3 June 2025	500,000,000
USD	50,000,000	3M USD Libor+0.55	23 June 2020	23 June 2023	50,000,000
USD	25,000,000	3M USD Libor+0.7	23 June 2020	23 June 2023	25,000,000
USD	100,000,000	3M USD Libor+0.45	20 July 2020	20 January 2022*	100,000,000
USD	45,000,000	3M USD Libor+0.45	24 July 2020	24 January 2022*	45,000,000
USD	40,000,000	3M USD Libor+0.45	31 July 2020	17 February 2022*	40,000,000
USD	40,000,000	3M USD Libor+0.45	3 August 2020	3 February 2022*	40,000,000
USD	45,000,000	3M USD Libor+0.55	11 August 2020	11 August 2023	45,000,000
USD	200,000,000	SOFR+0.55	21 September 2020	21 March 2022*	200,000,000
USD	50,000,000	0.720	22 September 2020	22 September 2023	50,000,000
USD	500,000,000	0.800	27 October 2020	27 April 2026	500,000,000
USD	150,000,000	0.500	27 October 2020	27 October 2023	150,000,000
USD	350,000,000	0.500	27 October 2020	27 October 2023	350,000,000
USD	100,000,000	3M USD Libor+0.22	30 November 2020	31 May 2022*	100,000,000
USD	50,000,000	3M USD Libor+0.22	1 December 2020	1 June 2022*	50,000,000
USD	50,000,000	0.440	1 December 2020	1 June 2022*	50,000,000
USD	20,000,000	0.470	2 December 2020	2 June 2022*	20,000,000
USD	30,000,000	0.520	9 December 2020	8 December 2023	30,000,000
USD	50,000,000	0.430	23 December 2020	23 June 2022*	50,000,000
USD	700,000,000	0.400	19 January 2021	19 June 2024	700,000,000
USD	500,000,000	0.800	19 January 2021	19 July 2026	500,000,000
USD	300,000,000	1.625	19 January 2021	19 January 2031	300,000,000
USD	100,000,000	0.470	29 January 2021	29 January 2024	100,000,000
USD	50,000,000	3M USD Libor+0.09	25 February 2021	25 February 2022*	50,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
USD	100,000,000	3M USD Libor+0.17	26 February 2021	26 February 2024	100,000,000
USD	100,000,000	3M USD Libor+0.14	26 February 2021	26 February 2023	100,000,000
USD	400,000,000	0.400	9 March 2021	9 March 2024	400,000,000
USD	300,000,000	SOFR+0.25	9 March 2021	9 March 2024	300,000,000
USD	500,000,000	1.000	9 March 2021	9 September 2026	500,000,000
USD	50,000,000	0.645	15 March 2021	15 March 2024	50,000,000
USD	50,000,000	0.590	26 March 2021	26 March 2024	50,000,000
USD	300,000,000	2.000	1 April 2021	1 April 2031	300,000,000
USD	30,000,000	0.590	1 April 2021	1 April 2024	30,000,000
USD	200,000,000	SOFR+0.29	18 May 2021	18 May 2025	200,000,000
USD	100,000,000	1.146	18 May 2021	18 May 2026	100,000,000
USD	50,000,000	0.300	4 May 2021	5 May 2022*	50,000,000
USD	100,000,000	1.035	18 June 2021	18 June 2026	100,000,000
USD	50,000,000	0.610	2 June 2021	2 June 2024	50,000,000
USD	100,000,000	1.015	4 June 2021	4 December 2025	100,000,000
USD	100,000,000	1.145	4 June 2021	4 June 2026	100,000,000
USD	100,000,000	3M USD Libor+0.25	11 June 2021	11 June 2026	100,000,000
USD	50,000,000	0.380	15 July 2021	15 July 2023	50,000,000
USD	50,000,000	0.710	8 July 2021	8 July 2024	50,000,000
USD	50,000,000	2.470	24 August 2021	24 August 2051	50,000,000
USD	100,000,000	0.180	2 August 2021	3 August 2022	100,000,000
USD	50,000,000	0.180	10 August 2021	11 August 2022	50,000,000
USD	50,000,000	0.710	19 August 2021	19 August 2024	50,000,000
USD	200,000,000	1.750	27 September 2021	27 September 2031	200,000,000
USD	50,000,000	0.700	2 September 2021	2 September 2024	50,000,000
USD	20,000,000	2.850	12 October 2021	12 October 2051	20,000,000
USD	20,000,000	2.925	18 October 2021	18 October 2051	20,000,000
USD	700,000,000	0.750	25 October 2021	25 January 2025	700,000,000
USD	500,000,000	1.375	25 October 2021	25 April 2027	500,000,000
USD	300,000,000	2.000	25 October 2021	25 October 2031	300,000,000
USD	20,000,000	2.870	19 November 2021	19 November 2051	20,000,000
USD	20,000,000	1.448	2 December 2021	2 December 2025	20,000,000
Subtotal in Original Currency					USD22,544,700,000
Subtotal in Equivalent Amount of Won <sup>(1)</sup>					₩26,726,741,850,000
NZD	27,000,000	2.600	1 June 2021	1 June 2031	27,000,000
NZD	27,000,000	2.600	9 June 2021	9 June 2031	27,000,000
NZD	27,000,000	2.600	16 June 2021	16 June 2031	27,000,000
NZD	29,000,000	3.000	8 October 2021	8 October 2031	29,000,000
Subtotal in Original Currency					NZD110,000,000
Subtotal in Equivalent Amount of Won <sup>(2)</sup>					₩89,060,400,000
HKD	350,000,000	2.060	25 October 2016	25 October 2023	350,000,000
HKD	205,000,000	2.570	27 October 2017	27 October 2022	205,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
HKD	162,000,000	2.685	19 December 2017	19 December 2022	162,000,000
HKD	390,000,000	2.053	8 November 2019	8 November 2024	390,000,000
HKD	243,000,000	2.214	26 November 2019	26 November 2024	243,000,000
HKD	201,000,000	1.850	27 February 2020	27 February 2023	201,000,000
HKD	160,000,000	2.100	25 March 2020	25 March 2025	160,000,000
HKD	300,000,000	2.100	14 April 2020	14 April 2023	300,000,000
HKD	250,000,000	3M Hibor+1.03	27 April 2020	27 April 2024	250,000,000
HKD	200,000,000	0.740	1 September 2021	12 September 2025	200,000,000
Subtotal in Original Currency					HKD2,461,000,000
Subtotal in Equivalent Amount of Won <sup>(3)</sup>					₩374,145,830,000
CNH	150,000,000	4.450	8 November 2013	8 November 2023	150,000,000
CNH	210,000,000	4.100	18 December 2013	18 December 2023	210,000,000
CNH	287,000,000	3.010	6 May 2020	6 May 2025	287,000,000
CNH	355,000,000	2.700	14 May 2020	14 May 2023	355,000,000
CNH	250,000,000	2.600	15 May 2020	15 May 2023	250,000,000
CNH	250,000,000	2.650	15 May 2020	15 May 2023	250,000,000
CNH	150,000,000	2.800	12 August 2020	12 August 2022	150,000,000
CNH	200,000,000	2.800	1 September 2020	1 September 2022	200,000,000
CNH	270,000,000	2.800	7 September 2020	7 September 2022	270,000,000
CNH	200,000,000	2.900	7 April 2021	7 April 2022*	200,000,000
CNH	250,000,000	2.660	14 July 2021	15 July 2022*	250,000,000
Subtotal in Original Currency					CNH2,572,000,000
Subtotal in Equivalent Amount of Won <sup>(4)</sup>					₩ 479,060,720,000
EUR	500,000,000	0.625	17 July 2018	17 July 2023	500,000,000
EUR	300,000,000	0.625	6 November 2018	17 July 2023	300,000,000
EUR	300,000,000	0.000	10 July 2019	10 July 2024	300,000,000
EUR	200,000,000	0.000	10 July 2019	10 July 2024	200,000,000
EUR	10,000,000	3M Euribor+0.7	12 December 2019	12 December 2024	10,000,000
EUR	50,000,000	3M Euribor+0.8	17 August 2020	17 August 2022	50,000,000
EUR	25,000,000	3M Euribor+0.8	7 September 2020	7 September 2022	25,000,000
EUR	25,000,000	3M Euribor+0.8	14 October 2020	14 October 2022	25,000,000
Subtotal in Original Currency					EUR1,410,000,000
Subtotal in Equivalent Amount of Won <sup>(5)</sup>					₩1,892,699,400,000
CHF	200,000,000	0.303	14 June 2018	14 June 2023	200,000,000
CHF	100,000,000	0.050	2 August 2018	23 December 2022	100,000,000
CHF	300,000,000	0.445	8 May 2020	8 May 2025	300,000,000
CHF	200,000,000	0.170	22 July 2021	22 July 2031	200,000,000
Subtotal in Original Currency					CHF800,000,000
Subtotal in Equivalent Amount of Won <sup>(6)</sup>					₩1,037,976,000,000
BRL	265,000,000	3.010	13 July 2020	23 June 2022*	265,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
BRL	266,000,000	3.000	14 July 2020	23 June 2022*	266,000,000
BRL	257,000,000	3.010	5 August 2020	28 July 2022*	257,000,000
BRL	160,000,000	3.010	6 August 2020	28 July 2022*	160,000,000
BRL	250,000,000	2.845	1 September 2020	4 August 2022	250,000,000
BRL	250,000,000	2.851	2 September 2020	4 August 2022	250,000,000
BRL	264,000,000	3.095	17 September 2020	2 September 2022	264,000,000
BRL	265,000,000	4.470	3 December 2020	22 December 2022	265,000,000
BRL	267,000,000	3.980	7 December 2020	21 October 2022	267,000,000
BRL	540,000,000	3.910	17 February 2021	22 November 2022	540,000,000
BRL	540,000,000	3.695	18 February 2021	26 August 2022	540,000,000
BRL	270,000,000	3.670	10 February 2021	28 September 2022	270,000,000
BRL	240,000,000	3.065	17 February 2021	7 April 2022*	240,000,000
BRL	190,000,000	4.180	1 April 2021	24 May 2022*	190,000,000
BRL	180,000,000	4.185	1 April 2021	24 May 2022*	180,000,000
BRL	705,500,000	5.206	17 May 2021	15 December 2022	705,500,000
BRL	1,294,000,000	6.618	30 July 2021	26 January 2023	1,294,000,000
BRL	200,000,000	6.400	12 July 2021	27 February 2023	200,000,000
BRL	500,000,000	6.100	12 July 2021	12 July 2022*	500,000,000
BRL	190,000,000	6.440	13 July 2021	27 February 2023	190,000,000
BRL	562,500,000	10.865	10 December 2021	4 January 2024	562,500,000
Subtotal in Original Currency					BRL7,656,000,000
Subtotal in Equivalent Amount of Won <sup>(7)</sup>					₩1,629,043,680,000
AUD	20,000,000	3.370	11 February 2015	11 February 2022*	20,000,000
AUD	22,900,000	2.550	5 July 2016	5 July 2022*	22,900,000
AUD	100,000,000	3.966	30 November 2016	30 November 2026	100,000,000
AUD	60,000,000	3.760	18 January 2018	18 January 2028	60,000,000
AUD	100,000,000	3M BBSW+0.98	19 October 2018	19 October 2023	100,000,000
AUD	300,000,000	3M BBSW+0.98	19 October 2018	19 October 2023	300,000,000
AUD	100,000,000	3M BBSW+0.78	29 August 2019	29 August 2024	100,000,000
AUD	400,000,000	3M BBSW+0.78	29 August 2019	29 August 2024	400,000,000
AUD	200,000,000	1.500	29 August 2019	29 August 2024	200,000,000
AUD	50,000,000	1.515	19 November 2019	19 November 2022	50,000,000
AUD	26,000,000	1.510	19 November 2019	19 November 2022	26,000,000
AUD	74,000,000	1.460	24 February 2020	24 February 2025	74,000,000
AUD	74,000,000	1.460	24 February 2020	24 February 2025	74,000,000
AUD	74,000,000	1.450	25 February 2020	25 February 2025	74,000,000
AUD	74,000,000	1.450	25 February 2020	25 February 2025	74,000,000
AUD	300,000,000	0.833	25 August 2020	25 August 2023	300,000,000
AUD	200,000,000	3M BBSW+0.62	25 August 2020	25 August 2023	200,000,000
AUD	56,000,000	2.565	7 April 2021	1 April 2036	56,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
AUD	30,000,000	2.550	28 September 2021	28 September 2041	30,000,000
AUD	40,000,000	2.500	28 September 2021	28 September 2041	40,000,000
AUD	40,000,000	3M BBSW+0.70	28 September 2021	28 September 2031	40,000,000
AUD	60,000,000	2.550	30 September 2021	30 September 2036	60,000,000
AUD	50,000,000	2.780	18 October 2021	18 October 2041	50,000,000
AUD	30,000,000	3.190	26 November 2021	26 November 2041	30,000,000
AUD	50,000,000	3.240	30 November 2021	30 November 2041	50,000,000
Subtotal in Original Currency					AUD2,530,900,000
Subtotal in Equivalent Amount of Won <sup>(8)</sup>					₩2,173,764,701,000
IDR	670,000,000,000	7.000	30 November 2017	30 November 2022	670,000,000,000
IDR	680,000,000,000	6.000	22 January 2020	22 January 2025	680,000,000,000
IDR	615,000,000,000	6.000	23 January 2020	23 January 2025	615,000,000,000
IDR	1,424,800,000,000	4.800	10 June 2021	10 June 2023	1,424,800,000,000
Subtotal in Original Currency					IDR3,389,800,000,000
Subtotal in Equivalent Amount of Won <sup>(9)</sup>					₩281,692,380,000
INR	3,200,000,000	6.900	20 February 2018	20 February 2023	3,200,000,000
INR	7,248,000,000	5.135	7 April 2021	7 April 2022*	7,248,000,000
INR	3,712,500,000	5.980	13 October 2021	13 October 2026	3,712,500,000
Subtotal in Original Currency					INR14,160,500,000
Subtotal in Equivalent Amount of Won <sup>(10)</sup>					₩225,576,765,000
NOK	400,000,000	2.905	21 July 2015	21 July 2025	400,000,000
Subtotal in Original Currency					NOK400,000,000
Subtotal in Equivalent Amount of Won <sup>(11)</sup>					₩53,716,000,000
THB	1,500,000,000	1.580	14 January 2020	14 January 2025	1,500,000,000
THB	1,500,000,000	1.530	15 January 2020	15 January 2025	1,500,000,000
THB	1,580,000,000	1.170	3 March 2020	3 March 2025	1,580,000,000
Subtotal in Original Currency					THB4,580,000,000
Subtotal in Equivalent Amount of Won <sup>(12)</sup>					₩162,910,600,000
GBP	250,000,000	1.750	31 October 2017	15 December 2022	250,000,000
GBP	35,000,000	1.267	21 November 2019	21 November 2022	35,000,000
GBP	35,000,000	1.267	21 November 2019	21 November 2022	35,000,000
GBP	35,000,000	1.230	22 November 2019	22 November 2022	35,000,000
GBP	35,000,000	1.230	22 November 2019	22 November 2022	35,000,000
GBP	30,000,000	1.230	22 November 2019	22 November 2022	30,000,000
GBP	36,000,000	1.279	26 November 2019	26 November 2022	36,000,000
GBP	36,000,000	1.270	26 November 2019	26 November 2022	36,000,000
GBP	30,000,000	0.437	16 July 2020	16 July 2022*	30,000,000
Subtotal in Original Currency					GBP522,000,000
Subtotal in Equivalent Amount of Won <sup>(13)</sup>					₩835,330,500,000
SEK	400,000,000	1.83	10 August 2017	10 August 2027	400,000,000
SEK	400,000,000	1.815	16 August 2017	16 August 2027	400,000,000
SEK	410,000,000	1.74	30 November 2017	30 November 2027	410,000,000

Currency	Original Principal Amount	Interest Rate (%)	Issue Date	Maturity Date	Principal Amount Outstanding as of 31 December 2021
SEK	200,000,000	2.01	27 February 2018	27 February 2028	200,000,000
		Subtotal in Original Currency			SEK1,410,000,000
		Subtotal in Equivalent Amount of Won <sup>(14)</sup>			₩ 184,766,400,000
MXN	1,200,000,000	6.000	7 May 2020	7 May 2023	1,200,000,000
		Subtotal in Original Currency			MXN1,200,000,000
		Subtotal in Equivalent Amount of Won <sup>(15)</sup>			₩69,528,000,000
<b>Total External Bonds of KDB in Equivalent Amount of Won</b>					<b>₩36,216,013,226,000</b>

Notes:

\* Repaid on the respective maturity dates.

- (1) U.S. dollar amounts are converted to Won amounts at the rate of US\$1.00 to Won 1,185.50, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (2) New Zealand dollar amounts are converted to Won amounts at the rate of NZD 1.00 to Won 809.64, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (3) Hong Kong dollar amounts are converted to Won amounts at the rate of HKD 1.00 to Won 152.03, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (4) Chinese offshore renminbi amounts are converted to Won amounts at the rate of CNH 1.00 to Won 186.26, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (5) Euro amounts are converted to Won amounts at the rate of EUR 1.00 to Won 1,342.34, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (6) Swiss franc amounts are converted to Won amounts at the rate of CHF 1.00 to Won 1,297.47, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (7) Brazilian real amounts are converted to Won amounts at the rate of BRL 1.00 to Won 212.78, the prevailing market rate on 31 December 2021.
- (8) Australian dollar amounts are converted to Won amounts at the rate of AUD 1.00 to Won 858.89, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (9) Indonesian rupiah amounts are converted to Won amounts at the rate of IDR 100.00 to Won 8.31, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (10) Indian Rupee amounts are converted to Won amounts at the rate of INR 1.00 to Won 15.93, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (11) Norwegian Krone amounts are converted to Won amounts at the rate of NOK 1.00 to Won 134.29, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (12) Thai Baht amounts are converted to Won amounts at the rate of THB 1.00 to Won 35.57, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (13) Great Britain Sterling amounts are converted to Won amounts at the rate of GBP 1.00 to Won 1,600.25, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (14) Swedish Krona amounts are converted to Won amounts at the rate of SEK 1.00 to Won 131.04, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.
- (15) Mexican Peso amounts are converted to Won amounts at the rate of MXN 1.00 to Won 57.94, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.

(2) External Borrowings of KDB

Lender	Classifications	Range of Interest Rates	Range of Years of Issue	Range of Years of Maturity	Principal Amount Outstanding as of 31 December 2021 <sup>(1)</sup>
		(%)			(millions of Won)
Mizuho and others .....	Borrowings from foreign banks	3M Libor + 0.29~6M Libor + 0.24	2021	2022~2023	355,650
Ministry of Economy and Finance..	Exchange equalisation fund borrowings in foreign currencies	3M Libor + 0.65~3M Libor + 0.74	2014~2015	2022~2024	199,792
Central Bank of the Republic of Uzbekistan and others.....	Off-shore short-term borrowings	0.16~2.36	2021	2022	1,292,571
China Development Bank and others .....	Off-shore long-term borrowings	2.68~3.36	2021	2022~2023	1,007,560
Others .....	Short-term borrowings in foreign currency	0.07~5.31	2021	2022	11,775,597
	Long-term borrowings in foreign currency	0.10~1.00	2019~2021	2022~2024	934,287
Total External Borrowings of KDB					₩15,565,457

Note:

- (1) Converted to Won amounts at the relevant market average exchange rates in effect on 31 December 2021 as announced by Seoul Money Brokerage Services, Ltd.

**B. Internal Debt of KDB**

Title	Range of Interest Rates	Range of Years of Issue	Range of Years of Original Maturity	Principal Amounts Outstanding as of 31 December 2021
	(%)			(millions of Won)
<b>1. Bonds</b>				
Short-term Industrial Finance Bonds.....	0.94~1.69	2021	2022	2,620,000
Long-term Industrial Finance Bonds .....	0.75~6.60	2007~2021	2013~2051	108,369,013
Total Bonds .....	0.75~6.6	2007~2021	2013~2051	110,989,013
<b>2. Borrowings</b>				
Borrowings from the Ministry of Economy and Finance.....	0.98~1.19	2003~2012	2020~2032	₩108,932

Title	Range of Interest Rates	Range of Years of Issue	Range of Years of Original Maturity	Principal Amounts Outstanding as of 31 December 2021
				(millions of Won)
Borrowings from Small & Medium Business Corp.....	0.51~2.76	2014~2021	2021~2032	61,240
Borrowings from the Ministry of Culture and Tourism.....	0.50~2.00	2010~2021	2021~2032	3,005,749
Borrowings from Korea Energy Management Corporation .....	0.25~2.30	2008~2021	2021~2036	282,178
Others <sup>(1)</sup> .....	0.10~3.15	2003~2021	2019~2044	871,699
Total Borrowings <sup>(2)</sup> .....				4,329,798
<b>3. Other Debt<sup>(3)</sup></b> .....				1,307,268
Total Internal Floating Debt <sup>(4)</sup> .....				4,305,428
Total Internal Funded Debt <sup>(5)</sup> .....				112,320,651
Total Internal Debt.....				₩116,626,079

Notes:

- (1) Includes borrowings from local governments, The Bank of Korea, the petroleum enterprises support fund and others.
- (2) Consist of short-term borrowings in the amount of ₩378,160 million and long-term borrowings in the amount of ₩3,951,638 million.
- (3) Other debt includes bonds sold under repurchase agreements and call money.
- (4) Floating debt is debt that has a maturity at issuance of less than one year.
- (5) Funded debt is debt that has a maturity at issuance of one year or more.

### Financial Statements and the Auditors

The Government elects the Bank's Auditor who is responsible for examining the Bank's financial operations and auditing its financial statements and records. The present Auditor is Tae Hyun Joo, who was appointed by the Financial Services Commission for a three-year term on 15 March 2021.

The Bank prepares its financial statements annually for submission to the Financial Services Commission, accompanied by an opinion of the Auditor. Although the Bank is not legally required to have financial statements audited by external independent auditors, an independent public accounting firm has audited its separate and consolidated financial statements commencing with such financial statements as of and for the year ended 31 December 1998. As of the date of this Information Memorandum, the Bank's external independent auditor is Nexia Samduk, located at 12F, S&S Building, 48 Ujeongguk-ro, Jongno-gu, Seoul 03145, Korea, which has audited the Bank's separate financial statements as of and for the years ended 31 December 2021 and 2020 included in this Information Memorandum.

The Bank's separate financial statements appearing in this Information Memorandum were prepared in conformity with Korean IFRS, as summarised in "—Financial Statements and the Auditors—Notes to Separate

Financial Statements of December 31, 2021 and 2020—Note 2.” These principles and procedures differ in certain material respects from generally accepted accounting principles in the United States.

K-IFRS 1109, *Financial Instruments*, which is aimed at improving and simplifying the accounting treatment of financial instruments, is effective for annual periods beginning on or after 1 January 2018 and replaces K-IFRS 1039, *Financial Instruments: Recognition and Measurement*. The Bank has applied the new accounting standard, K-IFRS 1109, which requires all financial assets to be classified and measured on the basis of an entity’s business model for managing financial assets and the contractual cash flow characteristics of the financial assets, in its separate financial statements as of and for the years ended 31 December 2021 and 2020 included in this Information Memorandum.

K-IFRS 1116, *Leases*, is aimed at facilitating a more faithful representation of, and improving the transparency of information relating to, lease-related assets and liabilities, and is effective for annual periods beginning on or after 1 January 2019. K-IFRS 1116, which replaces K-IFRS 1017, *Leases*, requires a lessee to recognise a right-of-use asset representing the lessee’s right to use the underlying leased asset and a lease liability representing the present value of the lessee’s obligation to make future lease payments. The Bank has applied K-IFRS 1116 in its separate financial statements beginning with the year ended 31 December 2019. For additional information relating to K-IFRS 1116, see “—Notes to Separate Financial Statements of 31 December 2021 and 2020—Note 2(2).”

For additional information regarding changes to our accounting policies and their effect on our separate financial statements, see “—Notes to Separate Financial Statements of 31 December 2021 and 2020—Note 2(2).”

The Bank generally records its debt securities investments, except for its trading portfolio of marketable debt securities, at the cost of acquisition (including incidental expenses related to purchase), computed on the specific identification method. The Bank records its trading portfolio of marketable debt securities at market value. Starting in April 1999, the Bank records all its debt securities investments at market value except for debt securities invested with the intention of holding until maturity, which the Bank records at the cost of acquisition or amortised cost.

The Bank records the value of its premises and equipment on its statements of financial position on the basis of a revaluation conducted as of 1 July 1998. The Minister of Economy and Finance approved the revaluation in accordance with applicable Korean law. The Bank values additions to premises and equipment since such date at cost.

## **DESCRIPTION OF THE BANK'S HONG KONG BRANCH**

The Bank opened its overseas branch in Hong Kong in April 2022 to provide commercial banking services to corporate customers, institutional investors, and financial institutions. The core businesses of the branch are corporate banking, treasury, securities and trade finance. The Bank's Hong Kong Branch had a total of 24 employees as of 30 June 2022 and the address of the branch is Suites 2009-2010, 20/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong.

### **Regulation of the Hong Kong Branch**

#### **Regulation under the laws of Hong Kong**

The Bank has been granted a restricted banking license, effective 19 November 2021, by the Hong Kong Monetary Authority under the Banking Ordinance. The Hong Kong Monetary Authority is responsible for the authorisation, regulation and supervision of banking business and the business of taking deposits in Hong Kong.

#### **Regulation under Korean Law**

With the prior approval of the Minister of Finance and Economy, the Bank established its Hong Kong Branch in 2022. In 2008, the Ministry of Finance and Economy and the Ministry of Planning and Budget merged into the Ministry of Strategy and Finance (currently the Ministry of Economy and Finance) and the Ministry of Finance and Economy's authority to implement financial policies and to regulate the financial market was transferred to the Financial Services Commission. In addition to being subject to the laws and regulations of the host country, the Bank's Hong Kong Branch is also subject to the regulations and directives of the head of the Financial Supervisory Service. The Financial Supervisory Service, which is under the oversight of the Financial Services Commission, has the authority to approve and supervise the overseas branches of Korean banks since the legislation of the Regulation on Overseas Expansion of Financial Institutions in 2008. The overseas branches of Korean banks, in accordance with such guidelines, are required to conduct business activities in accordance with the report of establishment under Article 12(1) of the Regulation on Overseas Expansion of Financial Institutions.

## **DESCRIPTION OF THE BANK'S LONDON BRANCH**

The Bank opened its overseas branch in London, United Kingdom on 31 July 1997 to provide a full range of commercial banking services to corporate customers, institutional investors, and financial institutions. The core businesses of the branch are corporate banking, securities, derivatives, and treasury. The branch also services the Bank's branches in Korea and the Bank's clients in Korea for their foreign exchange operations, including but not limited to inward remittances and letters of credit. The Bank's London Branch had a total of 53 employees as of 31 December 2021 and the address of the branch is Floor 11 (West Side), 22 Bishopsgate, London EC2N 4BQ, United Kingdom.

### **Regulation of the London Branch**

#### **Regulation under the laws of England**

The Bank is registered with the Financial Conduct Authority ("FCA") and is dual regulated by the FCA and the Prudential Regulatory Authority ("PRA"). Both the FCA and PRA are independent organisations responsible for regulating financial services within the United Kingdom.

#### **Regulation under Korean Law**

With the prior approval of the Minister of Finance and Economy, the Bank established its London Branch in 1997. The Bank's London Branch is subject to the same Korean regulation on overseas branches of Korean financial institutions as the Bank's other overseas branches. See "Description of the Bank's Hong Kong Branch— Regulation under Korean Law."

## **DESCRIPTION OF THE BANK'S NEW YORK BRANCH**

The Bank opened its overseas branch in New York, United States on 1 April 1997 to engage in international banking transactions and provide financial services to customers in the United States. The core businesses of the branch are corporate banking, securities, and trade finance. The branch also services the Bank's branches in Korea and the Bank's clients in Korea for their foreign exchange operations, including but not limited to inward remittances and letters of credit. The Bank's New York Branch had a total of 37 employees as of 31 December 2021 and the address of the branch is 320 Park Avenue, New York, New York 10022.

### **Regulation of the New York Branch**

#### **Regulation under the laws of the United States**

The Bank is licenced by the Superintendent of Banks of the State of New York under the New York Banking Law. The Bank is examined by the New York State Department of Financial Services and the Board of Governors of the Federal Reserve System and is subject to banking laws and regulations applicable to a foreign bank that operates a New York branch. The obligations of the Bank are not insured by the Federal Deposit Insurance Corporation.

#### **Regulation under Korean Law**

With the prior approval of the Minister of Finance and Economy, the Bank established its New York Branch in 1997. The Bank's New York Branch is subject to the same Korean regulation on overseas branches of Korean financial institutions as the Bank's other overseas branches. See "Description of the Bank's Hong Kong Branch— Regulation under Korean Law."

## **DESCRIPTION OF THE BANK'S TOKYO BRANCH**

The Bank opened its overseas branch in Tokyo, Japan on 22 October 1991 to engage in international banking transactions and provide financial services to customers in Japan. The core businesses of the branch are corporate banking, securities, and trade finance. The branch also services the Bank's branches in Korea and the Bank's clients in Korea for their foreign exchange operations, including but not limited to inward remittances and letters of credit. The Bank's Tokyo Branch had a total of 24 employees as of 31 December 2021 and the address of the branch is GranTokyo North Tower 36F, 1-9-1 Marunouchi, Chiyoda-ku, Tokyo, Japan.

### **Regulation of the Tokyo Branch**

#### **Regulation under the laws of Japan**

The Bank is licenced by the Financial Services Agency ("FSA") under the Banking Act. FSA is a Japanese government agency and an integrated financial regulator responsible for overseeing banking, securities and exchange, and insurance sectors in order to ensure the stability of the financial system of Japan.

#### **Regulation under Korean Law**

With the prior approval of the Minister of Finance and Economy, the Bank established its Tokyo Branch in 1991. The Bank's Tokyo Branch is subject to the same Korean regulation on overseas branches of Korean financial institutions as the Bank's other overseas branches. See "Description of the Bank's Hong Kong Branch— Regulation under Korean Law."

## **DESCRIPTION OF THE BANK'S SINGAPORE BRANCH**

The Bank opened its overseas branch in Singapore on 6 August 1996 to meet the growing demands of customers in Southeast Asia. Its core businesses are corporate banking, fixed income investment, trade finance, and project finance. The Bank's Singapore Branch had a total of 75 employees as of 31 December 2021 and the address of the branch is 138 Market Street, #35-02/03 CapitaGreen, Singapore 048946.

### **Regulation of the Singapore Branch**

#### **Regulation under the laws of Singapore**

The Bank's Singapore Branch is licensed by Monetary Authority of Singapore ("MAS") and is supervised and regulated by MAS. It is subject to the Banking Act and MAS Act applicable to a wholesale bank in Singapore.

#### **Regulation under Korean Law**

With the prior approval of the Minister of Finance and Economy, the Bank established its Singapore Branch in 1996. The Bank's Singapore Branch is subject to the same Korean regulation on overseas branches of Korean financial institutions as the Bank's other overseas branches. See "Description of the Bank's Hong Kong Branch— Regulation under Korean Law."

## THE REPUBLIC OF KOREA

### Land and History

#### *Territory and Population*

Located generally south of the 38th parallel on the Korean peninsula, The Republic of Korea covers about 38,000 square miles, approximately one-fourth of which is arable. The Republic has a population of approximately 51 million people. The country's largest city and capital, Seoul, has a population of about 10 million people.

#### *Map of the Republic of Korea*



#### *Political History*

Dr. Rhee Seungman, who was elected President in each of 1948, 1952, 1956 and 1960, dominated the years after the Republic's founding in 1948. Shortly after President Rhee's resignation in 1960 in response to student-led demonstrations, a group of military leaders headed by Park Chung Hee assumed power by coup. The military leaders established a civilian government, and the country elected Mr. Park as President in October 1963. President Park served as President until his assassination in 1979 following a period of increasing strife between the Government and its critics. The Government declared martial law and formed an interim government under Prime Minister Choi Kyu Hah, who became the next President. After clashes between the Government and its critics, President Choi resigned, and General Chun Doo Hwan, who took control of the Korean army, became President in 1980.

In late 1980, the country approved, by national referendum, a new Constitution, providing for indirect election of the President by an electoral college and for certain democratic reforms, and shortly thereafter, in early 1981, re-elected President Chun.

Responding to public demonstrations in 1987, the legislature revised the Constitution to provide for direct election of the President. In December 1987, Roh Tae Woo won the presidency by a narrow plurality, after opposition parties led by Kim Young Sam and Kim Dae Jung failed to unite behind a single candidate. In February 1990, two opposition political parties, including the one led by Kim Young Sam, merged into President Roh's ruling Democratic Liberal Party.

In December 1992, the country elected Kim Young Sam as President. The election of a civilian and former opposition party leader considerably lessened the controversy concerning the legitimacy of the political regime. President Kim's administration reformed the political sector and deregulated and internationalised the Korean economy.

In December 1997, the country elected Kim Dae Jung as President. President Kim's party, the Millennium Democratic Party (formerly known as the National Congress for New Politics), formed a coalition with the United Liberal Democrats led by Kim Jong Pil, with Kim Jong Pil becoming the first prime minister in President Kim's administration. The coalition, which temporarily ended before the election held in April 2000, continued with the appointment of Lee Han Dong of the United Liberal Democrats as the Prime Minister in June 2000. The coalition again ended in September 2001.

In December 2002, the country elected Roh Moo Hyun as President. President Roh and his supporters left the Millennium Democratic Party in 2003 and formed a new party, the Uri Party, in November 2003. On 15 August 2007, 85 members of the National Assembly, previously belonging to the Uri Party, or the Democratic Party, formed the United New Democratic Party, or the UNDP. The Uri Party merged into the UNDP on 20 August 2007. In February 2008, the UNDP merged back into the Democratic Party. In December 2011, the Democratic Party merged with the Citizens Unity Party to form the Democratic United Party, which changed its name to the Democratic Party in May 2013.

In December 2007, the country elected Lee Myung-Bak as President. He commenced his term on 25 February 2008. In April 2018, the Korean prosecutor's office indicted former President Lee on 16 counts of corruption, including bribery, abuse of power, embezzlement and other irregularities. In October 2018, a Seoul district court sentenced him to 15 years of prison term, which decision he subsequently appealed. In October 2020, the Supreme Court ruled against such appeal and sentenced him to 17 years of prison term, which he is currently serving.

In December 2012, the country elected Park Geun-hye as President. She commenced her term on 25 February 2013. In March 2017, the Constitutional Court unanimously upheld a parliamentary vote to impeach President Park, triggering her immediate dismissal, for a number of constitutional and criminal violations, including violation of the Constitution and abuse of power by allowing her confidants to exert influence on state affairs and allowing senior presidential aides to aid in her extortion from companies. After a series of trials, former President Park was sentenced to a combined 22 years of prison term and a fine of ₩21.5 billion. In light of her deteriorating health, however, former President Park was granted a special pardon by President Moon, her successor, and was released from prison on 31 December 2021.

A special election to elect a successor to former President Park was held on 9 May 2017 and the country elected Moon Jae-in as President. His term, which commenced on 10 May 2017, ended on 9 May 2022.

In March 2022, the country elected Yoon Suk-yeol as President. His term commenced on 10 May 2022. The Yoon administration's key policy objectives include, among others, the following:

- mitigating the adverse effects of the ongoing COVID-19 pandemic on the Korean economy, including through the provision of relief packages in support of small businesses and the self-employed;
- stabilising the housing market by increasing the supply of new homes and reforming property-related tax regulations;
- pursuing economic prosperity by promoting private sector growth and supporting the semiconductor, artificial intelligence, battery and other strategic industries;
- pursuing the denuclearization of the Korean Peninsula, enhancing Korea's core military capabilities and improving foreign relations and national security;
- pursuing enhanced environmental, social and corporate governance management, including through efforts to achieve carbon neutrality by reversing the previous administration's nuclear-phase out policy and combining renewable energy with nuclear power generation; and
- pursuing an efficient management of the government through various measures, including the establishment of a digital platform and the relocation of presidential offices.

## **Government and Politics**

### ***Government and Administrative Structure***

Governmental authority in the Republic is centralised and concentrated in a strong presidency. The President is elected by popular vote and can only serve one term of five years. The President chairs the State Council, which consists of the President, the prime minister, the deputy prime ministers, the respective heads of Government ministries and the ministers of state. The President can select the members of the State Council and appoint or remove all other Government officials, except for elected local officials.

The President can veto new legislation and take emergency measures in cases of natural disaster, serious fiscal or economic crisis, state of war or other similar circumstances. The President must promptly seek the concurrence of the National Assembly for any emergency measures taken and failing to do so automatically invalidates the emergency measures. In the case of martial law, the President may declare martial law without the consent of the National Assembly; provided, however, that the National Assembly may request the President to rescind such martial law.

The National Assembly exercises the country's legislative power. The Constitution and the Election for Public Offices Act provide for the direct election of about 84% of the members of the National Assembly and the distribution of the remaining seats proportionately among parties winning more than five seats in the direct election or receiving over 3% of the popular vote. National Assembly members serve four-year terms. The National Assembly enacts laws, ratifies treaties and approves the national budget. The executive branch drafts most legislation and submits it to the National Assembly for approval.

The country's judicial branch comprises the Supreme Court, the Constitutional Court and lower courts of various levels. The President appoints the Chief Justice of the Supreme Court and appoints the other Justices of the Supreme Court upon the recommendation of the Chief Justice. All appointments to the Supreme Court require the consent of the National Assembly. The Chief Justice, with the consent of the conference of Supreme Court Justices, appoints all the other judges in Korea. Supreme Court Justices serve for six years and all other judges serve for ten years. Other than the Chief Justice, justices and judges may be reappointed to successive terms.

The President formally appoints all nine judges of the Constitutional Court, but three judges must be designated by the National Assembly and three by the Chief Justice of the Supreme Court. Constitutional Court judges serve for six years and may be reappointed to successive terms.

Administratively, the Republic comprises eight provinces, one special autonomous province (Jeju), one special city (Seoul), six metropolitan cities (Busan, Daegu, Incheon, Gwangju, Daejeon and Ulsan) and one special autonomous city (Sejong). From 1961 to 1995, the national government controlled the provinces and the President appointed provincial officials. Local autonomy, including the election of provincial officials, was reintroduced in June 1995.

### ***Political Parties***

The 21st legislative general election was held on 15 April 2020 and the term of the National Assembly members elected in the 21st legislative general election commenced on 30 May 2020. Currently, there are three major political parties: The Democratic Party of Korea, or the DPK, the People Power Party, or the PPP, and the Justice Party, or the JP.

As of 2 August 2022, the parties control the following number of seats in the National Assembly:

	<b>DPK</b>	<b>PPP</b>	<b>JP</b>	<b>Others</b>	<b>Total</b>
Number of seats .....	169	115	6	9	299

### ***Relations with North Korea***

Relations between the Republic and North Korea have been tense over most of the Republic's history. The Korean War began with the invasion of the Republic by communist forces from the north in 1950, which was repelled by the Republic and the United Nations forces led by the United States. Following a military stalemate, an armistice was reached establishing a demilitarised zone monitored by the United Nations in the vicinity of the 38th parallel in 1953.

North Korea maintains a military force estimated at more than a million regular troops, mostly concentrated near the northern side of the demilitarised zone, and approximately 7.6 million reserves. The Republic's military forces, composed of approximately 555,000 regular troops and 3.1 million reserves, maintain a state of military preparedness along the southern side of the demilitarised zone. In addition, the United States has maintained its military presence in the Republic since the signing of the armistice and currently has approximately 28,500 troops stationed in the Republic. The Republic and the United States share a joint command structure over their military forces in Korea. In October 2014, the United States and the Republic agreed to implement a conditions-based approach to the dissolution of their joint command structure at an appropriate future date, which would allow the Republic to assume the command of its own armed forces in the event of war on the Korean peninsula. Over the years, the Republic and the United States have entered into a series of Special Measures Agreements, or SMAs, which cover the Republic's contribution to the cost of maintaining the U.S. military presence in the Republic. In March 2021, the Republic and the United States reached an agreement to enter into a new six-year SMA, under which the Republic would increase its share of the cost of the American military presence in the Republic, which became effective in September 2021 upon ratification by the National Assembly.

The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, since the death of Kim Jong-il in December 2011, there has been increased uncertainty with respect to the future of North Korea's political leadership and concern regarding its implications for political and economic stability in the region. Kim Jong-il's third son, Kim Jong-eun, has assumed power as his father's designated successor.

In addition, there have been heightened security concerns in recent years stemming from North Korea's nuclear weapons and ballistic missile programmes as well as its hostile military and other actions against Korea. Some of the significant incidents in recent years include the following:

- From time to time, North Korea has conducted ballistic missile tests. In February 2016, North Korea launched a long-range rocket in violation of its agreement with the United States as well as United

Nations sanctions barring it from conducting launches that use ballistic missile technology. Despite international condemnation, North Korea released a statement that it intends to continue its rocket launch programme and it conducted a series of ballistic missile tests in 2016 and 2017. In response, the United Nations Security Council issued unanimous statements condemning North Korea and agreeing to continue to closely monitor the situation and to take further significant measures, and in December 2017, unanimously passed a resolution extending existing sanctions that were imposed on North Korea.

- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted three rounds of nuclear tests between October 2006 and February 2013. In January 2016, North Korea conducted a fourth nuclear test, claiming that the test involved its first hydrogen bomb. In September 2016, North Korea conducted a fifth nuclear test, claiming to have successfully detonated a nuclear warhead that could be mounted on ballistic missiles. In September 2017, North Korea announced that it successfully conducted its sixth nuclear test by detonating a hydrogen bomb designed to be mounted on an intercontinental ballistic missile, which resulted in increased tensions in the region and elicited strong objections worldwide. In response to such tests (as well as North Korea's long-range ballistic missile programme), the United Nations Security Council unanimously passed several rounds of resolutions condemning North Korea's actions and significantly expanding the scope of the sanctions applicable to North Korea, while the United States and the European Union also imposed additional sanctions on North Korea.
- In August 2015, two Korean soldiers were injured in a landmine explosion near the Korean demilitarised zone. Claiming the landmines were set by North Koreans, the Korean army re-initiated its propaganda programme toward North Korea utilising loudspeakers near the demilitarised zone. In retaliation, the North Korean army fired artillery rounds on the loudspeakers, resulting in the highest level of military readiness for both Koreas.
- In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea's Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

North Korea's economy also faces severe challenges, which may further aggravate social and political pressures within North Korea. Although bilateral summit meetings were held between Korea and North Korea in April and May 2018 and between the United States and North Korea in June 2018, February 2019 and June 2019, there can be no assurance that the level of tension on the Korean peninsula will not escalate in the future or that such escalation will not have a material adverse impact on the Republic's economy and the Bank. Any further increase in tension, which may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between the Republic and North Korea break down or further military hostilities occur, could have a material adverse effect on the Republic's economy and the Bank. Over the longer term, reunification of the two Koreas could occur. Reunification may entail a significant economic commitment by the Republic.

### ***Foreign Relations and International Organisations***

The Republic maintains diplomatic relations with most nations of the world, most importantly with the United States with which it entered into a mutual defence treaty and several economic agreements. The Republic also has important relationships with Japan and China, its largest trading partners together with the United States.

The Republic belongs to a number of supranational organisations, including:

- United Nations;
- the International Monetary Fund, or the IMF;
- the World Bank;
- the Asian Development Bank, or the ADB;
- the Multilateral Investment Guarantee Agency;
- the International Finance Corporation;
- the International Development Association;
- the African Development Bank;
- the European Bank for Reconstruction and Development;
- the Bank for International Settlements;
- the World Health Organization, or the WHO;
- the World Trade Organization, or the WTO;
- the International Atomic Energy Agency, or the IAEA;
- the Inter-American Development Bank, or the IDB;
- the Organization for Economic Cooperation and Development, or the OECD; and
- the Asian Infrastructure Investment Bank.

## The Economy

The following table sets forth information regarding certain of the Republic's key economic indicators for the periods indicated.

	As of or for the year ended 31 December				
	2017	2018	2019	2020	2021
	<i>(billions of dollars and trillions of Won, except percentages)</i>				
GDP Growth (at current prices).....	5.5%	3.1%	1.3%	0.7%	6.4% <sup>(7)</sup>
GDP Growth (at chained 2015 year prices) ....	3.2%	2.7%	2.3%	(0.7%)	4.0% <sup>(7)</sup>
Inflation <sup>(1)</sup> .....	1.9%	1.5%	0.4%	0.5%	2.5%
Unemployment <sup>(2)</sup> .....	3.7%	3.8%	3.8%	4.0%	3.7%
Trade Surplus <sup>(3)</sup> .....	\$95.2	\$69.7	\$38.9	\$44.9	\$29.4
Foreign Currency Reserves.....	\$389.3	\$403.7	\$408.8	\$443.1	\$463.1
External Liabilities <sup>(4)</sup> .....	\$412.0	\$441.2	\$470.7	\$544.9	\$628.5 <sup>(7)</sup>
Fiscal Balance.....	₩24.0	₩31.2	₩12.0	₩(71.2)	₩(30.4) <sup>(7)</sup>
Direct Internal Debt of the Government <sup>(5)</sup> (as % of GDP <sup>(6)</sup> ) .....	35.2%	35.6%	37.4%	44.2%	49.2% <sup>(7)</sup>
Direct External Debt of the Government <sup>(5)</sup> (as % of GDP <sup>(6)</sup> ) .....	0.4%	0.4%	0.4%	0.5%	0.6% <sup>(7)</sup>

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Notes:

- (1) Measured by the year-on-year change in the consumer price index with base year 2020, as announced by the Bank of Korea.
- (2) Average for year.
- (3) Derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods includes insurance and freight cost.
- (4) Calculated under the criteria based on the sixth edition of the Balance of Payment Manual published by the International Monetary Fund in December 2010.
- (5) Does not include guarantees by the Government. See “—Debt—External and Internal Debt of the Government—Guarantees by the Government” for information on outstanding guarantees by the Government.
- (6) At chained 2015 year prices.
- (7) Preliminary.

Source: The Bank of Korea

### ***Worldwide Economic and Financial Difficulties***

In recent years, the global financial markets have experienced significant volatility as a result of, among other things:

- the ongoing outbreak of the COVID-19 pandemic caused by a new strain of coronavirus, as further described below;
- hostilities, political or social tensions involving Russia (including the invasion of Ukraine by Russia and ensuing actions that the United States and other countries have taken or may take in the future, such as the imposition of sanctions against Russia) and the resulting adverse effects on the global supply of oil and other natural resources and the global financial markets;
- rising inflationary pressures leading to increases in the costs of goods and services and a decrease in purchasing power;
- interest rate fluctuations as well as perceived or actual changes in policy rates by, or other monetary and fiscal policies set forth by, the U.S. Federal Reserve and other central banks;
- disruptions in the global supply chain for raw materials, natural resources, consumer goods, rare earth minerals, component parts and other supplies, including as a result of the ongoing COVID-19 pandemic, government policies and labour shortages;
- a deterioration in economic and trade relations between the United States and its major trading partners, including China;
- increased uncertainties resulting from the United Kingdom’s exit from the European Union;
- financial and social difficulties affecting many governments worldwide, in particular in Latin America and Europe;
- escalations in trade protectionism globally and geopolitical tensions in East Asia and the Middle East;
- the slowdown of economic growth in China and other major emerging market economies;
- political and social instability in various countries in the Middle East, including Iraq, Syria and Yemen; and
- fluctuations in oil and commodity prices.

COVID-19, an infectious disease caused by severe acute respiratory syndrome coronavirus 2, has spread globally and was declared a “pandemic” by the WHO in March 2020. The ongoing COVID-19 pandemic has led to significant global economic and financial disruptions, including an adverse impact on international trade

and business activities. Although there have been mixed signs of recovery in the global economy resulting from the availability of COVID-19 vaccinations and gradual normalization of business activities, the extent to which the COVID-19 pandemic continues to impact the global economy will depend on future developments, including the scope and duration of the ongoing COVID-19 pandemic as well as the timeliness and effectiveness of actions taken by governmental authorities, central banks, healthcare providers and other third parties around the world in order to contain and mitigate the effects of COVID-19. The possibility of a global recession in major markets due to the impact of COVID-19, including discrepancies in vaccine rollout rates, continued decline in consumer confidence and weakened demand for face-to-face services, could cause significant volatility in the global economic and financial systems.

There has been significant volatility in global financial markets since the global outbreak of COVID-19, and more recently due to Russia's invasion of Ukraine and ensuing sanctions against Russia. See “—The Financial System—Securities Markets”. Declines in the index and large amounts of sales of Korean securities by foreign investors and subsequent repatriation of the proceeds of such sales may adversely affect the value of the Won, the foreign currency reserves held by financial institutions in Korea, and the ability of Korean companies and banks to raise capital. Moreover, the value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has fluctuated widely. A depreciation of the Won generally increases the cost of imported goods and services and the required amount of the Won revenue for Korean companies to service foreign currency-denominated debt.

In light of the high level of interdependence of the global economy, any of the foregoing developments could have a material adverse effect on the Korean economy and financial markets. In addition, in the event of difficult conditions in the global credit markets or a deterioration of the global economy in the future, the Korean economy could be adversely affected and Korean banks may be forced to fund their operations at a higher cost or may be unable to raise as much funding as they need to support their lending and other activities.

In addition to the global developments, domestic developments that could lead to or contribute to a material adverse effect on the Korean economy include, among other things, the following:

- a slowdown in consumer spending and depressed consumer sentiment due to the outbreak of infectious diseases, such as the ongoing COVID-19 pandemic discussed above, and national tragedies, such as the sinking of the Sewol passenger ferry in April 2014, which led to the death of hundreds of passengers;
- increasing delinquencies and credit defaults by consumer and small- and medium-sized enterprise borrowers, which may occur due to, among others, the impact of the ongoing COVID-19 pandemic;
- steadily rising household debt consisting of housing loans and merchandise credit, which increased to approximately Won 1,862.1 trillion as of 31 December 2021 from Won 843.2 trillion as of 31 December 2010, primarily due to increases in mortgage loans and purchases with credit cards;
- deterioration in economic or diplomatic relations between Korea and other countries resulting from territorial or trade disputes or disagreements in foreign policy;
- a substantial increase in the Government's expenditures for (i) fiscal stimulus measures to provide emergency relief payments to households and emergency loans to corporations in need of funding due to the COVID-19 pandemic and (ii) pension and social welfare programmes, due in part to an ageing population (defined as the population of people aged 65 years or older) that accounted for approximately 16.5% of the Republic's total population as of 31 December 2021, an increase from 7.2% as of 31 December 2000, and is expected to surpass 20.3% in 2025 that, together, would lead to the Government's budget deficit;
- decreases in the market prices of Korean real estate; and

- the occurrence of severe health epidemics that affect the livestock industry.

The first confirmed case of the COVID-19 disease in Korea was announced in January 2020 and the subsequent spread of the disease has since resulted in more than 19.9 million confirmed cases and more than 25,000 fatalities related to COVID-19 reported in Korea as of 2 August 2022. In response, the Government implemented a number of measures in order to contain the spread of the COVID-19 disease, including, among others, a nationwide order for social distancing, implementation of strict self-isolation and quarantine measures for those who may be infected, or have a higher chance of being infected, and the closure of public facilities until the possibility of further contamination has subsided sufficiently. In addition, the Government implemented the following measures, among others, in order to alleviate the adverse impact of the COVID-19 pandemic on the Korean economy and stabilise the financial markets:

- lowering of The Bank of Korea's policy rate from 1.25% to 0.75% in March 2020 and subsequently to 0.5% in May 2020 (which has subsequently been raised to 0.75% in August 2021, 1.00% in November 2021, 1.25% in January 2022, 1.50% in April 2022, 1.75% in May 2022 and 2.25% in July 2022) (See “—Monetary Policy—Interest Rates”);
- execution of a bilateral currency swap agreement with the U.S. Federal Reserve for the provision of US\$60 billion in exchange for the Republic's Won-denominated treasury bonds in March 2020, which agreement expired in December 2021 after three renewals throughout 2020 and 2021;
- execution of a number of supplementary budgets for spending on various measures to mitigate the adverse effects of the COVID-19 pandemic on the Korean economy, including (i) injection of cash into corporate and financial markets in the form of loans, guarantees and maturity extensions to eligible banks and financial institutions, small- and medium business enterprises, small merchants and self-employed business owners facing liquidity crises, and (ii) offer of emergency relief payments and expansion of social security contribution reliefs for those impacted by the COVID-19 pandemic, including underserved communities and the unemployed. See “—Government Finance”.

As part of its efforts to prepare for the post-COVID-19 era, the Government officially announced its plans to pursue a “Korean New Deal” in July 2020. Under such initiative, the Government aims to expedite the Republic's recovery from the COVID-19 pandemic and pursue a digital and green transformation of the Korean economy and to strengthen employment and social safety nets through a total investment of ₩160 trillion and the creation of 1.9 million new jobs by 2025. In order to contain further spread of COVID-19 and to prevent the outbreak of similar epidemics in the future, the Government has continued to cooperate actively with regional and international efforts to develop and implement various measures to combat such outbreaks.

In February 2021, the Government began its COVID-19 vaccination campaign, and as of 2 August 2022, more than 86% of the Korean population was fully vaccinated. The Government's plans to have the country return to life as normal was put on hold in recent months in light of the emergence of the new Omicron variant of COVID-19 beginning in December 2021 that spiraled further after mid-February 2022, followed by an exponential surge in the number of new daily cases of COVID-19 infections, peaking at more than 600,000 cases per day in March 2022. Subsequently, the number of confirmed cases began to decline substantially, and in April 2022, the Government announced that it would lift most of its pandemic-related restrictions, including the lifting of limits on private gatherings and extending restaurant hours, while keeping the indoor mask mandate. Although there has been a spike in new daily cases of COVID-19 infections again starting in early July 2022 following the rapid spread of BA.5, a highly contagious Omicron subvariant, the Government currently plans to continue to monitor the situation before reinstating any social distancing measures again, if at all.

While there are signs of recovery from the COVID-19 pandemic, the outlook for the Republic's economy and its financial services sector in 2022 and for the foreseeable future remains uncertain due to the ongoing impact

of the COVID-19 pandemic on the Korean and global economies and financial markets, as well as factors such as fluctuations in oil and commodity prices, interest rates and exchange rates, rising inflationary pressures, higher unemployment, lower consumer confidence, stock market volatility, changes in fiscal and monetary policies, the ongoing military conflict involving Russia and Ukraine, and continued tensions with North Korea.

### **Gross Domestic Product**

GDP measures the market value of all final goods and services produced within a country for a given period and reveals whether a country's productive output rises or falls over time. Economists present GDP in both current market prices and "real" or "inflation-adjusted" terms. In March 2009, the Republic adopted a method known as the "chain-linked" measure of GDP, replacing the previous fixed-base, or "constant" measure of GDP, to show the real growth of the aggregate economic activity, as recommended by the System of National Accounts 1993. GDP at current market prices values a country's output using the actual prices of each year, whereas the "chain-linked" measure of GDP is compiled by using "chained indices" linking volume growth between consecutive time periods. In March 2014, the Republic published a revised GDP calculation method by implementing the System of National Accounts 2008 and updating the reference year from 2005 to 2010 to align Korean national accounts statistics with the recommendations of the new international standards for compiling national economic accounts and to maintain comparability with other nations' accounts. The main components of these revisions include, among other things, (i) recognising expenditures for research and development and creative activity for the products of entertainment, literary and artistic originals as fixed investment, (ii) incorporating a wide array of new and revised source data such as the economic census, the population and housing census and 2010 benchmark input-output tables, which provide thorough and detailed information on the structure of the Korean economy, (iii) developing supply-use tables, which provide a statistical tool for ensuring consistency among the production, expenditure and income approaches to measuring GDP and (iv) recording merchandise trade transactions based on ownership changes rather than movements of goods across the national border. The Republic has updated the reference year from 2010 to 2015 in July 2019 to better align Korean national accounts statistics with the recommendations of the previously implemented System of National Accounts 2008 and to maintain comparability with other countries' accounts.

The following table sets out the composition of the Republic's GDP at current market and chained 2015 year prices and the annual average increase in the Republic's GDP.

Gross Domestic Product						As % of GDP 2021 <sup>(1)</sup>
	2017	2018	2019	2020	2021 <sup>(1)</sup>	2021 <sup>(1)</sup>
	(billions of Won)					
Gross Domestic Product at Current Market Prices:						
Private.....	872,791.4	908,273.7	931,669.5	897,449.2	952,529.9	46.3
Government .....	283,045.8	305,513.0	329,295.5	349,122.5	374,682.7	18.2
Gross Capital Formation .....	592,711.4	592,858.4	601,581.4	615,921.9	654,616.9	31.8
Exports of Goods and Services .....	751,428.5	788,279.0	766,602.0	704,554.0	858,424.8	41.7
Less Imports of Goods and Services ....	(664,278.8)	(701,150.7)	(710,990.2)	(633,487.5)	(782,697.7)	(38.0)
Statistical Discrepancy.....	0.0	(276.4)	881.5	(407.7)	(108.8)	0.0
Expenditures on Gross Domestic Product.....	1,835,698.2	1,893,497.0	1,919,039.9	1,933,152.4	2,057,447.8	100.0
Net Factor Income from the Rest of the World .....	7,482.6	4,955.7	16,675.3	14,868.3	25,128.7	1.2

	2017	2018	2019	2020	2021 <sup>(1)</sup>	As % of GDP 2021 <sup>(1)</sup>
			(billions of Won)			
Gross National Income <sup>(2)</sup> .....	1,843,180.9	1,898,452.7	1,935,715.2	1,948,020.7	2,082,576.5	101.2
<b>Gross Domestic Product at Chained 2015 Year Prices:</b>						
Private.....	848,589.3	872,304.4	890,167.7	849,072.1	879,770.0	46.0
Government .....	271,428.7	286,644.8	304,760.3	319,321.3	336,971.2	17.6
Gross Capital Formation .....	576,996.7	566,376.1	555,494.6	561,440.4	569,644.5	29.8
Exports of Goods and Services .....	747,783.5	773,752.6	790,874.0	765,015.6	840,601.8	44.0
Less Imports of Goods and Services....	(686,089.2)	(691,374.1)	(693,412.8)	(661,725.2)	(718,301.5)	(37.6)
Statistical Discrepancy.....	(1,130.3)	(2,511.7)	(1,429.8)	199.6	1,686.4	0.1
Expenditures on Gross Domestic Product <sup>(3)</sup> .....	1,760,811.5	1,807,735.9	1,848,958.5	1,836,881.1	1,910,745.0	100.0
Net Factor Income from the Rest of the World in the Terms of Trade.....	7,084.6	4,519.5	15,335.4	13,772.4	22,679.4	1.2
Trading Gains and Losses from Changes in the Terms of Trade .....	25,915.5	3,272.8	(40,224.9)	(26,407.1)	(46,122.6)	(2.4)
Gross National Income <sup>(4)</sup> .....	1,793,818.4	1,815,558.4	1,824,136.5	1,824,242.5	1,887,369.0	98.8
Percentage Increase (Decrease) of GDP over Previous Year:						
At Current Prices .....	5.5	3.1	1.3	0.7	6.4	
At Chained 2015 Year Prices .....	3.2	2.7	2.3	(0.7)	4.0	

Notes:

- (1) Preliminary.
- (2) GDP plus net factor income from the rest of the world is equal to the Republic's gross national income.
- (3) Under the "chain-linked" measure of GDP, the components of GDP will not necessarily add up to the total GDP.
- (4) Under the "chain-linked" measure of Gross National Income, the components of Gross National Income will not necessarily add up to the total Gross National Income.

Source: The Bank of Korea

The following table sets out the Republic's GDP by economic sector at current market prices:

**Gross Domestic Product by Economic Sector  
(at current market prices)**

	2017	2018	2019	2020	2021 <sup>(1)</sup>	As % of GDP 2021 <sup>(1)</sup>
			(billions of Won)			
Industrial Sectors:.....	672,178.8	680,553.1	661,196.9	665,292.9	706,020.9	34.3
Agriculture, Forestry and Fishing .....	33,974.3	34,528.9	31,134.9	35,421.0	37,827.3	1.8
Manufacturing, Mining and Quarrying	496,993.7	506,854.7	487,889.2	481,573.6	524,339.4	25.5
Mining and Quarrying .....	2,348.8	2,247.7	1,943.6	1,945.1	2,008.2	0.1
Manufacturing .....	494,644.9	504,607.0	485,945.6	479,628.5	522,331.2	25.4

	2017	2018	2019	2020	2021 <sup>(1)</sup>	As % of GDP 2021 <sup>(1)</sup>
	<i>(billions of Won)</i>					
Electricity, Gas and Water Supply .....	40,014.2	36,813.2	36,580.7	43,118.7	37,934.2	1.8
Construction .....	101,196.6	102,356.3	105,592.1	105,179.6	105,920.0	5.1
Services: .....	1,006,839.9	1,049,864.7	1,095,424.2	1,104,240.8	1,178,235.4	57.3
Wholesale and Retail Trade, Accommodation and Food Services.....	175,124.9	180,661.0	180,358.0	172,245.3	180,741.4	8.8
Transportation and Storage .....	58,283.7	57,088.1	59,949.6	56,077.8	67,546.2	3.3
Finance and Insurance .....	96,983.7	104,336.2	104,718.6	110,441.3	122,654.6	6.0
Real Estate .....	133,152.6	135,890.3	142,735.8	145,464.2	146,657.5	7.1
Information and Communication .....	76,712.2	79,242.9	82,602.9	87,500.1	97,715.8	4.7
Business Activities.....	154,495.4	161,832.1	175,225.1	179,476.6	190,842.6	9.3
Public Administration, Defence and Social Security .....	107,325.6	115,086.1	122,162.4	128,647.1	135,669.1	6.6
Education.....	87,880.4	90,933.2	93,717.9	92,681.0	98,113.1	4.8
Human Health and Social Work .....	74,706.8	80,937.0	88,588.1	93,245.6	98,383.3	4.8
Cultural and Other Services .....	42,174.6	43,857.8	45,365.8	38,461.8	39,911.8	1.9
Taxes Less Subsidies on Products .....	156,679.6	163,079.3	162,418.6	163,618.9	173,191.5	8.4
Gross Domestic Product at Current Market Prices.....	1,835,698.2	1,893,497.0	1,919,039.9	1,933,152.4	2,057,447.8	100.0
Net Factor Income from the Rest of the World .....	7,482.6	4,955.7	16,675.3	14,868.3	25,128.7	1.2
Gross National Income at Current Market Price .....	1,843,180.9	1,898,452.7	1,935,715.1	1,948,020.7	2,082,576.5	101.2

Note:

(1) Preliminary.

Source: The Bank of Korea

The following table sets out the Republic's GDP per capita:

**Gross Domestic Product per capita  
(at current market prices)**

	2017	2018	2019	2020	2021 <sup>(1)</sup>
GDP per capita (thousands of Won) .....	35,740	36,782	37,218	37,334	39,761
GDP per capita (U.S. dollar).....	31,605	33,429	31,929	31,637	34,744
Average Exchange Rate (in Won per U.S. dollar) .....	1,130.8	1,100.3	1,165.7	1,180.1	1,144.4

Note:

(1) Preliminary.

Source: The Bank of Korea

The following table sets out the Republic's Gross National Income, or GNI, per capita:

**Gross National Income per capita  
(at current market prices)**

	2017	2018	2019	2020	2021 <sup>(1)</sup>
GNI per capita (thousands of Won).....	35,886	36,930	37,539	37,621	40,247
GNI per capita (U.S. dollar).....	31,734	33,564	32,204	31,881	35,168
Average Exchange Rate (in Won per U.S. dollar) .....	1,130.8	1,100.3	1,165.7	1,180.1	1,144.4

Note:

(1) Preliminary.

Source: The Bank of Korea

The following table sets out the Republic's GDP by economic sector:

**Gross Domestic Product by Economic Sector  
(at chained 2015 year prices)**

	2017	2018	2019	2020	2021 <sup>(1)</sup>	As % of GDP 2021 <sup>(1)</sup>
	<i>(billions of Won)</i>					
Industrial Sectors:.....	640,516.9	654,072.8	658,741.5	653,510.5	686,758.2	35.9
Agriculture, Forestry and Fishing .....	32,059.8	32,540.4	32,859.2	32,054.3	32,931.8	1.7
Manufacturing, Mining and Quarrying	470,274.80	485,854.0	491,476.4	486,556.9	518,476.5	27.1
Mining and Quarrying .....	2,204.5	2,030.9	1,863.6	1,908.1	2,005.4	0.1
Manufacturing .....	468,070.3	483,823.1	489,612.8	484,648.8	516,471.1	27.0
Electricity, Gas and Water Supply .....	43,813.8	45,116.2	44,921.8	46,810.9	49,102.3	2.6
Construction .....	94,368.5	90,562.2	89,484.1	88,088.4	86,247.6	4.5
Services: .....	973,106.40	1,003,834.7	1,039,879.8	1,033,780.7	1,072,521.4	56.1
Wholesale and Retail Trade, Accommodation and Food Services.....	167,746.5	171,599.5	174,419.9	168,483.3	174,084.3	9.1
Transportation and Storage .....	60,289.1	61,888.5	62,746.9	53,954.4	56,762.3	3.0
Finance and Insurance .....	93,709.2	98,999.7	103,386.2	111,653.9	118,422.9	6.2
Real Estate .....	129,307.2	132,057.6	136,593.8	137,650.2	138,306.8	7.2
Information and Communication .....	75,814.3	78,941.7	82,473.3	85,520.8	90,643.7	4.7
Business Activities.....	147,949.8	150,522.3	157,790.8	156,898.3	161,333.0	8.4
Public Administration, Defence and Social Security .....	100,722.8	104,100.3	108,219.5	112,395.7	116,698.8	6.1
Education.....	84,806.1	86,440.9	87,493.6	85,465.3	89,481.3	4.7
Human Health and Social Work .....	72,330.1	78,160.0	85,046.7	87,053.5	91,231.0	4.8
Cultural and Other Services .....	40,495.8	41,218.1	41,709.1	34,705.3	35,557.3	1.9
Taxes Less Subsidies on Products .....	147,105.4	149,966.5	150,812.7	150,084.3	153,948.7	8.1
Gross Domestic Product <sup>(2)</sup> .....	1,760,811.5	1,807,735.9	1,848,958.5	1,836,881.1	1,910,745.0	100.0

Notes:

- (1) Preliminary.
- (2) Under the “chain-linked” measure of GDP, the components of GDP will not necessarily add up to the total GDP.

Source: The Bank of Korea

GDP growth in 2017 was 3.2% at chained 2015 year prices, as aggregate private and general government consumption expenditures increased by 3.1%, gross domestic fixed capital formation increased by 9.8% and exports of goods and services increased by 2.5%, which more than offset an increase in imports of goods and services by 8.9%, each compared with 2016.

GDP growth in 2018 was 2.7% at chained 2015 year prices, as aggregate private and general government consumption expenditures increased by 3.5% and exports of goods and services increased by 3.5%, which more than offset a decrease in gross domestic fixed capital formation by 2.4% and an increase in imports of goods and services by 0.8%, each compared with 2017.

GDP growth in 2019 was 2.3% at chained 2015 year prices, as aggregate private and general government consumption expenditures increased by 3.1%, exports of goods and services increased by 2.2% and imports of goods and services decreased by 0.3%, which more than offset a decrease in gross domestic fixed capital formation by 2.9%, each compared with 2018.

GDP in 2020 contracted by 0.7% at chained 2015 year prices, primarily due to a 4.6% decrease in private consumption expenditures and a 3.3% decrease in exports of goods and services, which were offset in part by a 4.8% increase in general government consumption expenditures, a 2.6% increase in gross domestic fixed capital formation and a 3.3% decrease in imports of goods and services, each compared with 2019. The contraction of the Republic's GDP in 2020 was primarily due to the ongoing COVID-19 pandemic.

Based on preliminary data, GDP growth in 2021 was 4.0% at chained 2015 year prices, as exports of goods and services increased by 9.9%, aggregate private and general government consumption expenditures increased by 4.2% and gross domestic fixed capital formation increased by 2.6%, which more than offset an increase in imports of goods and services by 8.5%, each compared with 2020.

Based on preliminary data, GDP growth in the first half of 2022 was 2.9% at chained 2015 year prices, as aggregate private and general government consumption expenditures increased by 4.5% and exports of goods and services increased by 6.0%, which more than offset an increase in imports of goods and services by 3.5% and a decrease in gross fixed capital formation by 3.3%, each compared with the corresponding period of 2021.

The Republic's GDP may be adversely affected in 2022 if adverse effects of the ongoing COVID-19 pandemic are prolonged.

## Principal Sectors of the Economy

### Industrial Sectors

The following table sets out production indices for the principal industrial products of the Republic and their relative contribution to total industrial production:

Industrial Production (2015 = 100)						
	Index Weight <sup>(1)</sup>	2017	2018	2019	2020	2021 <sup>(2)</sup>
Industries .....	10,000.0	104.8	106.3	106.7	106.3	114.3
Mining and Manufacturing.....	9,521.5	104.6	106.1	106.5	106.2	114.4

	<b>Index Weight<sup>(1)</sup></b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021<sup>(2)</sup></b>
Mining.....	32.0	100.2	89.5	85.4	84.1	81.4
Manufacturing.....	9,489.5	104.7	106.1	106.6	106.3	114.5
Food Products .....	585.7	102.9	104.1	108.0	109.4	110.9
Beverage Products.....	141.0	105.7	105.4	103.8	100.3	99.4
Tobacco Products.....	67.7	122.7	111.1	121.1	126.5	122.3
Textiles .....	129.8	95.2	88.7	83.5	74.7	78.9
Wearing Apparel, Clothing Accessories and Fur Articles.....	93.2	95.9	93.6	87.4	70.1	73.0
Tanning and Dressing of Leather, Luggage and Footwear.....	24.2	82.0	82.8	71.5	49.4	48.6
Wood and Products of Wood and Cork (Except Furniture) .....	36.6	103.7	95.3	87.0	85.5	86.1
Pulp, Paper and Paper Products....	161.8	97.5	97.0	95.6	93.7	96.9
Printing and Reproduction of Recorded Media.....	54.0	102.0	100.4	95.3	95.4	96.0
Coke, hard-coal and lignite fuel briquettes and Refined Petroleum Products .....	139.0	114.8	117.0	115.0	107.8	109.1
Chemicals and Chemical Products .....	845.3	109.1	111.6	110.1	106.8	114.7
Pharmaceuticals, Medicinal Chemicals and Botanical Products .....	305.5	118.5	128.1	131.6	142.8	148.6
Rubber and Plastic Products.....	497.3	99.9	95.1	93.3	87.5	90.8
Non-metallic Minerals .....	246.5	111.2	107.2	104.3	96.7	100.1
Basic Metals.....	594.9	102.9	100.1	97.8	91.7	97.0
Fabricated Metal Products.....	550.4	96.6	88.9	87.5	80.3	75.8
Electronic Components, Computer, Radio, Television and Communication Equipment and Apparatuses.....	1,963.8	112.6	125.9	132.0	147.7	177.7
Medical, Precision and Optical Instruments, Watches and Clocks	368.6	119.5	136.1	121.1	125.8	149.0
Electrical Equipment.....	517.6	106.6	106.5	109.6	108.7	115.1
Other Machinery and Equipment .	843.8	115.4	111.8	105.2	109.0	120.8
Motor Vehicles, Trailers and Semitrailers .....	927.2	95.1	93.9	93.4	84.1	88.2
Other Transport Equipment.....	285.4	68.0	61.6	72.3	70.1	61.3
Furniture .....	63.2	109.5	101.9	99.9	106.8	110.7
Other Products .....	47.0	108.2	102.7	108.0	101.7	103.7
Electricity, Gas.....	478.5	106.3	110.3	108.6	106.6	111.5
Total Index.....	10,000.0	104.8	106.3	106.7	106.3	114.3

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Notes:

- (1) Index weights were established on the basis of an industrial census in 2015 and reflect the average annual value added by production in each of the classifications shown, expressed as a percentage of total value added in the mining, manufacturing and electricity and gas industries in that year.
- (2) Preliminary.

Source: The Bank of Korea; Korea National Statistical Office

Industrial production increased by 2.5% in 2017, primarily due to increased domestic consumption and exports. Industrial production increased by 1.4% in 2018, primarily due to increased domestic consumption and exports. Industrial production increased by 0.4% in 2019, primarily due to increased domestic consumption.

Industrial production decreased by 0.4% in 2020, primarily due to decreased domestic consumption and exports resulting from the COVID-19 pandemic. Based on preliminary data, industrial production increased by 7.5% in 2021, primarily due to increased exports and domestic consumption.

### **Manufacturing**

The manufacturing sector increased production by 2.3% in 2017, primarily due to increased demand for consumer electronics products, electronic components (including semiconductors), communication equipment and chemical products, which more than offset decreased demand for motor vehicles, trailers and semitrailers. The manufacturing sector increased production by 1.3% in 2018, primarily due to increased demand for consumer electronics products and electronic components (including semiconductors). The manufacturing sector increased production by 0.5% in 2019, primarily due to increased demand for consumer electronics products and electronic components (including semiconductors). The manufacturing sector decreased production by 0.3% in 2020, primarily due to decreased demand for automobiles. Based on preliminary data, the manufacturing sector increased production by 7.7% in 2021, primarily due to increased demand for consumer electronics products, electronic components (including semiconductors) and machinery.

*Automobiles.* In 2017, automobile production decreased by 2.7%, domestic sales volume recorded a decrease of 2.5% and exports sales volume recorded a decrease of 3.5%, compared with 2016, primarily due to decreased domestic production of automobiles resulting mainly from partial strikes by unionised workers of automobile manufacturers, increased overseas production and decreased exports to the United States and China. In 2018, automobile production decreased by 2.1%, domestic sales volume recorded a decrease of 0.5% and exports sales volume recorded a decrease of 3.2%, compared with 2017, primarily due to decreased domestic production of automobiles resulting mainly from partial strikes by unionised workers of automobile manufacturers and the restructuring of GM Korea's production units and decreased exports to countries in South America and the Middle East. In 2019, automobile production decreased by 1.9%, domestic sales volume recorded a decrease of 1.8% and export sales volume recorded a decrease of 2.0%, compared with 2018, primarily due to decreased domestic production of automobiles resulting mainly from partial strikes by unionised workers of automobile manufacturers, increased overseas production, decreased domestic demand for automobiles and decreased demand for automobiles in China. In 2020, automobile production decreased by 11.2% and export sales volume recorded a decrease of 21.4%, compared with 2019, primarily due to a general decline in global demand for automobiles caused by the COVID-19 pandemic, which outpaced a 4.7% increase in domestic sales volume from 2019 to 2020, primarily due to increased domestic demand for automobiles. Based on preliminary data, in 2021, automobile production decreased by 1.3% and domestic sales volume recorded a decrease of 8.5%, compared with 2020, primarily due to the global shortage of semiconductors amid the ongoing COVID-19 pandemic, but exports sales volume recorded an increase of 8.6% compared with 2020, primarily due to an increase in the market share of domestic automobile manufacturers in the global automotive market.

*Electronics.* In 2017, electronics production amounted to ₩342,755 billion, an increase of 10.9% from the previous year, and exports amounted to US\$197.6 billion, an increase of 21.6% from the previous year,

primarily due to increases in demand for semiconductors, organic light-emitting diode, or OLED, display panels and computers. In 2017, export sales of semiconductor memory chips constituted approximately 17.4% of the Republic's total exports. In 2018, electronics production amounted to ₩365,548 billion, an increase of 6.6% from the previous year, and exports amounted to US\$220.3 billion, an increase of 11.5% from the previous year, primarily due to increases in demand for semiconductors and lithium-ion batteries. In 2018, export sales of semiconductor memory chips constituted approximately 21.2% of the Republic's total exports. In 2019, electronics production amounted to ₩322,729 billion, a decrease of 11.7% from the previous year, and exports amounted to US\$176.9 billion, a decrease of 19.7% from the previous year, primarily due to a significant decrease in semiconductor prices. In 2019, export sales of semiconductor memory chips constituted approximately 17.6% of the Republic's total exports. In 2020, electronics production amounted to ₩332,084 billion, an increase of 2.9% from the previous year, and exports of electronics amounted to US\$183.5 billion, an increase of 3.7% from the previous year, primarily due to an increase in demand for semiconductors, computers and other electronic apparatuses. In 2020, export sales of semiconductor memory chips constituted approximately 19.5% of the Republic's total exports. Based on preliminary data, in 2021, electronics production amounted to ₩368,407 billion, an increase of 10.9% from the previous year, and exports amounted to US\$227.6 billion, an increase of 24.0% from the previous year, primarily due to an increase in demand for semiconductors, display panels, mobile devices, solid state drives and secondary cell batteries. In 2021, export sales of semiconductor memory chips constituted approximately 20.0% of the Republic's total exports.

*Iron and Steel.* In 2017, crude steel production totalled 71.0 million tons, an increase of 3.7% from 2016, and export sales volume of iron and steel products increased by 2.3%, primarily due to an increase in global demand for crude steel products but domestic sales volume of iron and steel products decreased by 1.2%, primarily due to adverse conditions in the domestic shipbuilding and automobile industries. In 2018, crude steel production totalled 72.5 million tons, an increase of 1.9% from 2017, primarily due to the recovery of the domestic shipbuilding industry, but export sales volume of iron and steel products decreased by 3.9%, primarily due to restrictions on imports of steel products imposed by the United States, Canada and the European Union. In 2019, crude steel production totalled 71.4 million tons, a decrease of 1.5% from 2018, primarily due to adverse conditions in the construction and shipbuilding industries, and export sales volume of iron and steel products decreased by 0.2%, primarily due to continued restrictions on imports of steel products imposed by the United States, Canada and the European Union. In 2020, crude steel production totalled 67.1 million tons, a decrease of 6.0% from 2019, primarily due to adverse conditions in the construction and shipbuilding industries in light of the COVID-19 pandemic, and export sales volume of iron and steel products decreased by 4.9%, primarily due to a decrease in global demand for crude steel products resulting from the COVID-19 pandemic. Based on preliminary data, in 2021, crude steel production totalled 70.4 million tons, an increase of 4.9% from 2020, primarily due to an increase in domestic demand for crude steel products following a gradual economic recovery from the COVID-19 pandemic, but export sales volume of iron and steel products decreased by 6.1%, primarily due to an increase in the price of steel products coupled with a decrease in global demand for crude steel products resulting from the ongoing COVID-19 pandemic.

*Shipbuilding.* In 2017, the Republic's shipbuilding orders amounted to approximately 8 million compensated gross tons, an increase of 300% compared to 2016, primarily due to increased demand for LNG carriers, bulk carriers and container carriers. In 2018, the Republic's shipbuilding orders amounted to approximately 13 million compensated gross tons, an increase of 62.5% compared to 2017, primarily due to increased demand for LNG carriers, oil tankers and container carriers. In 2019, the Republic's shipbuilding orders amounted to approximately 10 million compensated gross tons, a decrease of 23.1% compared to 2018, primarily due to decreased demand for container carriers and bulk carriers, which more than offset increased demand for LNG carriers. In 2020, the Republic's shipbuilding orders amounted to approximately 8 million compensated gross tons, a decrease of 20.0% compared to 2019, primarily due to the adverse conditions in the domestic and global shipbuilding industry resulting from the COVID-19 pandemic. Based on preliminary data, in 2021, the

Republic's shipbuilding orders amounted to approximately 17 million compensated gross tons, an increase of 112.5% compared to 2020, primarily due to increased demand for container carriers and LNG carriers.

### ***Agriculture, Forestry and Fisheries***

The Government's agricultural policy has traditionally focused on:

- grain production;
- development of irrigation systems;
- land consolidation and reclamation;
- seed improvement;
- mechanisation measures to combat drought and flood damage; and
- increasing agricultural incomes.

Recently, however, the Government has increased emphasis on cultivating profitable crops and strengthening international competitiveness as a result of the continued opening of the domestic agricultural market.

In 2017, rice production decreased 5.3% from 2016 to 4.0 million tons. In 2018, rice production decreased 2.5% from 2017 to 3.9 million tons. In 2019, rice production decreased 5.1% from 2018 to 3.7 million tons. In 2020, rice production decreased 5.4% from 2019 to 3.5 million tons. In 2021, rice production increased 11.4% from 2020 to 3.9 million tons. Due to limited crop yields resulting from geographical and physical constraints, the Republic depends on imports for certain basic foodstuffs.

The Government is seeking to develop the fishing industry by encouraging the building of large fishing vessels and modernising fishing equipment, marketing techniques and distribution outlets.

In 2017, the agriculture, forestry and fisheries industry increased by 2.3% compared to 2016, primarily due to an increase in aquafarming production. In 2018, the agriculture, forestry and fisheries industry increased by 0.2% compared to 2017, primarily due to an increase in livestock production. In 2019, the agriculture, forestry and fisheries industry increased by 3.9% compared to 2018, primarily due to an increase in farming and livestock production. In 2020, the agriculture, forestry and fisheries industry decreased by 4.0% compared to 2019, primarily due to a decrease in farming and livestock production. Based on preliminary data, in 2021, the agriculture, forestry and fisheries industry increased by 2.7% compared to 2020, primarily due to an increase in farming and fisheries production.

### ***Construction***

In 2017, the construction industry increased by 5.9% compared to 2016, primarily due to an increase in the construction of residential and commercial buildings. In 2018, the construction industry decreased by 2.8% compared to 2017, primarily due to a decrease in the construction of residential and commercial buildings. In 2019, the construction industry decreased by 2.6% compared to 2018, primarily due to a continued decrease in the construction of residential buildings. In 2020, the construction industry decreased by 1.4% compared to 2019, primarily due to a decrease in the construction of residential buildings. Based on preliminary data, in 2021, the construction industry decreased by 2.1% compared to 2020, primarily due to a decrease in the construction of residential buildings.

### ***Electricity and Gas***

The following table sets out the Republic's dependence on imports for energy consumption:

### Dependence on Imports for Energy Consumption

	<b>Total Primary Energy Supply</b>	<b>Imports</b>	<b>Imports Dependence Ratio</b>
	<i>(millions of tons of oil equivalents<sup>(1)</sup>, except ratios)</i>		
2017 .....	302.5	284.4	94.0
2018 .....	307.6	288.1	93.7
2019 .....	303.1	283.4	93.5
2020 .....	292.1	271.1	92.8
2021 <sup>(2)</sup> .....	305.2	283.2	92.8

Notes:

(1) Conversion to tons of oil equivalents was calculated based on energy conversion factors under the Energy Act Enforcement Decree as amended in July 2017.

(2) Preliminary.

Source: Korea Energy Economics Institute; Korea National Statistical Office

Korea has almost no domestic oil or gas production and depends on imported oil and gas to meet its energy requirements. Accordingly, the international prices of oil and gas significantly affect the Korean economy. Any significant long-term increase in the prices of oil and gas will increase inflationary pressures in Korea and adversely affect the Republic's balance of trade.

To reduce its dependence on oil and gas imports, the Government has encouraged energy conservation and energy source diversification emphasising nuclear energy. The following table sets out the principal primary sources of energy supplied in the Republic, expressed in oil equivalents and as a percentage of total energy consumption.

### Primary Energy Supply by Source

	<b>Coal</b>		<b>Petroleum</b>		<b>Nuclear</b>		<b>Others<sup>(1)</sup></b>		<b>Total</b>	
	<b>Quantity</b>	<b>%</b>	<b>Quantity</b>	<b>%</b>	<b>Quantity</b>	<b>%</b>	<b>Quantity</b>	<b>%</b>	<b>Quantity</b>	<b>%</b>
	<i>(millions of tons of oil equivalents<sup>(2)</sup>, except percentages)</i>									
2017 .....	86,177	28.5	119,824	39.6	31,615	10.5	64,874	21.4	302,490	100.0
2018 .....	86,707	28.2	118,521	38.5	28,437	9.2	73,892	24.0	307,557	100.0
2019 .....	82,147	27.1	117,314	38.7	31,079	10.3	72,553	23.9	303,092	100.0
2020 .....	72,241	24.7	110,240	37.7	34,119	11.7	75,476	25.8	292,076	100.0
2021 <sup>(3)</sup> .....	75,520	23.8	117,764	38.6	33,657	11.0	81,251	26.6	305,191	100.0

Notes:

(1) Includes natural gas, hydroelectric power and renewable energy.

(2) Conversion to tons of oil equivalents was calculated based on energy conversion factors under the Energy Act Enforcement Decree as amended in July 2017.

(3) Preliminary.

The Republic's first nuclear power plant went into full operation in 1978 with a rated generating capacity of 587 megawatts. As of 31 December 2021, the Republic had 24 nuclear plants with a total estimated nuclear power installed generating capacity of 23,250 megawatts and four nuclear plants under construction. In December 2020, the Government announced the Ninth Basic Plan for the period from 2020 to 2034, which focuses on, among other things, (i) changing energy policy to a safe and clean energy mix by reducing coal and nuclear power generation and increasing renewable energy, (ii) preparing implementation measures for further reduction of greenhouse gas, (iii) accelerating investments in renewable energy and expanding infrastructure for the transition to a low-carbon economy/society and (iv) improving the electricity market system to promote fair competition and lay the foundation for expansion of eco-friendly energy. Furthermore, the Ninth Basic Plan includes the following implementation measures: (i) six coal-fired generation plants will be retired by 2022, (ii) 24 other coal-fired generation plants will be retired and converted to LNG fuel use by 2034, (iii) domestic renewable energy generation capacity will be expanded to 77.8 gigawatts by 2034 to meet the target set in the Third Basic National Energy Plan and (iv) the extension of life of eleven nuclear generation units will not be granted and such units will be retired by 2034.

### Services Sector

In 2017, the service industry increased by 2.6% compared to 2016 as the health and social work sector increased by 6.4%, the finance and insurance sector increased by 4.2% and the public administration and defence sector increased by 2.8%, each compared with 2016. In 2018, the service industry increased by 3.8% compared to 2017 as the health and social work sector increased by 8.2%, the finance and insurance sector increased by 5.6% and the public administration and defence sector increased by 3.4%, each compared with 2017. In 2019, the service industry increased by 3.4% compared to 2018 as the health and social work sector increased by 8.7%, the public administration and defence sector increased by 4.0% and the finance and insurance sector increased by 4.4%, each compared with 2018. In 2020, the service industry decreased by 1.0% compared to 2019 as the wholesale and retail trade, accommodation and food services sector decreased by 5.7%, the transportation and storage sector decreased by 15.1% and the cultural and other services sector decreased by 18.7%, each compared with 2019. Based on preliminary data, in 2021, the service industry increased by 3.7% compared to 2020 as the finance and insurance sector increased by 6.1%, the wholesale and retail trade, accommodation and food services sector increased by 3.3% and the information and communication sector increased by 6.0%, each compared with 2020.

### Prices, Wages and Employment

The following table shows selected price and wage indices and unemployment rates:

	Producer Price Index <sup>(1)</sup>	Increase (Decrease) Over Previous Year	Consumer Price Index <sup>(1)</sup>	Increase (Decrease) Over Previous Year	Wage Index <sup>(1)(2)</sup>	Increase (Decrease) Over Previous Year	Unemploy- ment Rate <sup>(1)(3)</sup>
	(2015=100)	(%)	(2020=100)	(%)	(2015=100)	(%)	(%)
2017.....	101.6	3.5	97.6	1.9	106.4	2.1	3.7
2018.....	103.5	1.9	99.1	1.5	113.6	6.8	3.8
2019.....	103.5	0.0	99.5	0.4	116.2	2.3	3.8
2020.....	103.0	(0.5)	100.0	0.5	115.5	(0.6)	4.0
2021.....	109.6	6.4	102.5	2.5	123.5	6.9	3.7

Notes:

- (1) Average for year.
- (2) Nominal wage index of average earnings in the manufacturing industry.
- (3) Expressed as a percentage of the economically active population.

Source: The Bank of Korea; Korea National Statistical Office

In 2017, the inflation rate increased to 1.9%, primarily due to increases in the prices of agricultural and livestock products and oil. In 2018, the inflation rate decreased to 1.5%, primarily due to a slowdown in the growth rate of agricultural goods and oil prices. In 2019, the inflation rate decreased to 0.4%, primarily due to decreases in the prices of agricultural and livestock products and oil. In 2020, the inflation rate increased to 0.5%, primarily due to increases in agricultural and livestock product prices. In 2021, the inflation rate increased to 2.5%, primarily due to increases in agricultural and livestock product prices and oil prices. Based on preliminary data, the inflation rate was 3.8% in the first quarter of 2022 and 5.4% in the second quarter of 2022.

In 2017, the unemployment rate remained unchanged at 3.7%. In 2018, the unemployment rate increased to 3.8%, primarily due to the continued sluggishness of the domestic economy. In 2019, the unemployment rate remained constant at 3.8%. In 2020, the unemployment rate increased to 4.0%, primarily due to the COVID-19 pandemic. In 2021, the unemployment rate decreased to 3.7%, reflecting a gradual recovery of the Korean economy from the COVID-19 pandemic. Based on preliminary data, the unemployment rate was 3.5% in the first quarter of 2022 and 3.0% in the second quarter of 2022.

From 1992 to 2009, the economically active population of the Republic increased by approximately 24.8% to 24.3 million, while the number of employees increased by approximately 23.7% to 23.5 million. The economically active population over 15 years old as a percentage of the total over-15 population has remained between 61% and 63% over the past decade. Literacy among workers under 50 is almost universal. As of 31 December 2021, the economically active population of the Republic was 28.3 million and the number of employees was 27.3 million.

The following table shows selected employment information by industry and by gender:

	2017	2018	2019	2020	2021
	<i>(all figures in percentages, except as indicated)</i>				
Labour force (in thousands of persons).....	26,725	26,822	27,123	26,904	27,273
Employment by Industry:					
Agriculture, Forestry and Fishing.....	4.8	5.0	5.1	5.4	5.3
Mining and Manufacturing.....	17.2	16.9	16.4	16.3	16.1
S.O.C & Services .....	78.0	78.1	78.5	78.3	78.6
Electricity, Transport, Communication and Finance .....	11.4	11.8	11.7	11.8	12.3
Business, Private & Public Service and Other Services .....	36.4	36.5	37.4	38.0	38.6
Construction .....	7.4	7.6	7.4	7.5	7.7
Wholesale & Retail Trade, Hotels and Restaurants.....	22.8	22.2	22.0	21.0	20.0
Total Employed.....	100.0	100.0	100.0	100.0	100.0
Employment by Gender:					
Male .....	57.5	57.3	57.0	57.2	57.0
Female.....	42.5	42.7	43.0	42.8	43.0

	2017	2018	2019	2020	2021
	<i>(all figures in percentages, except as indicated)</i>				
Total Employed.....	100.0	100.0	100.0	100.0	100.0

Source: The Bank of Korea

Pursuant to certain amendments to the Labor Standards Act that became effective on 1 July 2018, the maximum working hours of employees is in the process of being reduced from 68 hours per week to 52 hours per week, and the number of special industries that are exempt from restrictions on maximum working hours will be significantly reduced. This new maximum working hours restriction under the amended Labor Standards Act is in effect for workplaces with 300 or more workers from 1 July 2018, and has been extended to workplaces with 50 or more but fewer than 300 workers from 1 January 2020, and has been further extended to workplaces with five or more but fewer than 50 workers from 1 July 2021.

Labour unrest in connection with demands by unionised workers for better wages and working conditions and greater job security occur from time to time in the Republic. Some of the significant incidents in recent years include the following:

- In September 2017, several thousand unionised workers at KBS and MBC, Korea's two largest television and radio broadcasters, went on strike, which lasted several months, to protest against alleged management interference in news coverage and unfair labour practices.
- In 2017, unionised workers at Hyundai Motor went on a series of partial strikes demanding higher wages and bonuses.
- In July 2018, unionised workers at Hyundai Heavy Industries went on full strike demanding higher wages.
- In May 2019, unionised bus drivers launched a nationwide strike seeking higher wages and increased manpower in time for the 52-hour work week that was implemented in July 2019.
- In September 2019, unionised workers at GM Korea went on full strike, the first in more than 20 years, demanding higher wages and protesting against GM Korea's restructuring plans.
- In October and November 2019, several thousand members of the National Railroad Workers' Union went on full strike demanding a normalisation of wages and requesting the hiring of additional personnel.
- In October, November and December 2020, unionised workers at GM Korea went on partial strikes during wage and collective agreement negotiations.
- In November and December 2020, unionised workers at Kia went on partial strikes demanding higher wages, performance-based incentives and other benefits.
- In November and December 2021, unionised workers at Hankook Tire & Technology, one of Korea's largest tire makers, went on a full strike demanding higher wages and performance-based incentive payments.
- In 2021, unionised workers at CJ Logistics, one of Korea's largest freight transportation companies, went on a series of partial strikes and demonstrations, demanding higher wages commensurate with increases in parcel delivery fees.

Actions such as these by labour unions may hinder implementation of the labour reform measures and disrupt the Government's plans to create a more flexible labour market. Although much effort is being expended to

resolve labour disputes in a peaceful manner, there can be no assurance that further labour unrest will not occur in the future. Continued labour unrest in key industries of the Republic may have an adverse effect on the economy.

In 1997, the Korean Confederation of Trade Unions organised a political alliance, which led to the formation of the Democratic Labor Party in January 2000. The Democratic Labor Party merged with The New People's Participation Party and changed its name to The Unified Progressive Party, or the UPP, in December 2011. In October 2012, the UPP split and seven UPP members of the National Assembly and their supporters formed a new party, the Progressive Justice Party, which changed its name to the Justice Party in July 2013. In December 2014, the Constitutional Court ordered the dissolution of the UPP and the removal of the party's five lawmakers from the National Assembly for violating the Republic's Constitution after certain of its members were convicted of trying to instigate an armed rebellion and supporting North Korea. In the legislative general election held on 13 April 2016, the Justice Party won six seats in the National Assembly, and the members-elect began their four-year terms on 30 May 2016. As of 31 December 2021, the Justice Party held six seats in the National Assembly.

## **The Financial System**

### ***Structure of the Financial Sector***

The Republic's financial sector includes the following categories of financial institutions:

- The Bank of Korea;
- banking institutions;
- non-bank financial institutions; and
- other financial entities, including:
  - financial investment companies;
  - credit guarantee institutions;
  - venture capital companies; and
  - miscellaneous others.

To increase transparency in financial transactions and enhance the integrity and efficiency of the financial markets, Korean law requires that financial institutions confirm that their clients use their real names when transacting business. The Government also strengthened confidentiality protection for private financial transactions.

In July 2007, the Korean National Assembly passed the Financial Investment Services and Capital Markets Act, or the FSCMA, under which various industry-based capital markets regulatory systems were consolidated into a single regulatory system. The FSCMA, which became effective in February 2009, expands the scope of permitted investment-related financial products and activities through expansive definitions of financial instruments and function-based regulations that allow financial investment companies to offer a wider range of financial services, as well as strengthening investor protection and disclosure requirements.

Prior to the effective date of the FSCMA, separate laws regulated various types of financial institutions depending on the type of the financial institution (for example, securities companies, futures companies, trust business companies and asset management companies) and subjected financial institutions to different licensing and ongoing regulatory requirements (for example, under the Securities and Exchange Act, the Futures Trading Act and the Indirect Investment Asset Management Business Act). By applying one uniform set of rules to

financial businesses having the same economic function, the FSCMA attempts to improve and address issues caused by the previous regulatory system under which the same economic function relating to capital markets-related business were governed by multiple regulations. To this end, the FSCMA categorises capital markets-related businesses into six different functions as follows:

- investment dealing (trading and underwriting of financial investment products);
- investment brokerage (brokerage of financial investment products);
- collective investment (establishment of collective investment schemes and the management thereof);
- investment advice;
- discretionary investment management; and
- trusts (together with the five businesses set forth above, the Financial Investment Businesses).

Accordingly, all financial businesses relating to financial investment products are reclassified as one or more of the Financial Investment Businesses described above, and financial institutions are subject to the regulations applicable to their relevant Financial Investment Businesses, irrespective of what type of financial institution it is. For example, under the FSCMA, derivative businesses conducted by securities companies and future companies are subject to the same regulations, at least in principle.

The banking business and the insurance business are not subject to the FSCMA and will continue to be regulated under separate laws; provided, however, that they are subject to the FSCMA if their activities involve any Financial Investment Businesses requiring a license based on the FSCMA.

### ***Banking Industry***

The banking industry comprises commercial banks and specialised banks. Commercial banks serve the general public and corporate sectors. They include nationwide banks, regional banks and branches of foreign banks. Regional banks provide services similar to nationwide banks, but operate in a geographically restricted region. Branches of foreign banks have operated in the Republic since 1967 but provide a relatively small proportion of the country's banking services. As of 31 December 2021, there were six nationwide banks, six regional banks, three internet banks and 35 foreign banks with branches operating in the Republic.

Specialised banks meet the needs of specific sectors of the economy in accordance with Government policy; they are organised under, or chartered by, special laws. Specialised banks include (i) The Korea Development Bank, (ii) The Export-Import Bank of Korea, (iii) The Industrial Bank of Korea, (iv) SuHyup Bank and (v) NongHyup Bank. The Government has made capital contributions to three of these specialised banks as follows:

- **The Korea Development Bank:** the Government owns directly all of its paid-in capital and has made capital contributions since its establishment in 1954. Recent examples include the Government's contributions to its capital of ₩395 billion in 2017, ₩170 billion in 2018, ₩555 billion in 2019, ₩2,103 billion in 2020 and ₩1,121 billion in 2021. Taking into account these capital contributions, its total paid-in capital was ₩21,887 billion as of 31 December 2021.
- **The Export-Import Bank of Korea:** the Government owns, directly and indirectly, all of its paid-in capital and has made capital contributions since its establishment in 1976. Recent examples include the Government's contributions to its capital of ₩1,417 billion in 2017, ₩56 billion in 2019, ₩578 billion in 2020 and ₩299 billion in 2021. Taking into account these capital contributions, its total paid-in capital was ₩12,748 billion as of 31 December 2021.
- **The Industrial Bank of Korea:** the Government directly owned 59.5% of its total shares (including common and preferred shares) as of 31 December 2021. The Government had owned all of the issued

share capital of The Industrial Bank of Korea until 1994, but the Government's minimum share ownership requirement was repealed in 1997, and the Government has since periodically adjusted its ownership percentage in the Industrial Bank of Korea through transactions involving the purchase and sale of its common shares. In 2019, the Industrial Bank of Korea issued an aggregate of 17,178,164 new common shares to the Government for a total of ₩225 billion in cash. In 2020, the Industrial Bank of Korea issued an aggregate of 161,507,381 new common shares to the Government for a total of ₩1,266 billion in cash. In November 2020, the Industrial Bank of Korea acquired from the Government and cancelled an aggregate of 44,847,038 perpetual preferred shares that it had previously issued to the Government. In May 2021, the Industrial Bank of Korea issued and sold 5,636,227 new ordinary shares to the Government for an aggregate consideration of ₩49 billion in cash. Taking into account such transactions, its total paid-in capital was ₩4,211 billion as of 31 December 2021.

The economic difficulties in 1997 and 1998 caused an increase in Korean banks' non-performing assets and a decline in capital adequacy ratios of Korean banks. From 1998 through 2002, the Financial Services Commission amended banking regulations several times to adopt more stringent criteria for non-performing assets that more closely followed international standards.

The following table sets out the total loans (including loans in Won and loans in foreign currencies) and non-performing assets of Korean banks as of the dates indicated.

	<b>Total Loans</b>	<b>Non-Performing Assets<sup>(1)</sup></b>	<b>Percentage of Total</b>
	<i>(trillions of Won)</i>		<i>(percentage)</i>
31 December 2017 .....	1,775.9	21.1	1.2
31 December 2018 .....	1,872.6	18.2	1.0
31 December 2019 .....	1,980.6	15.3	0.8
31 December 2020 .....	2,171.7	13.9	0.6
31 December 2021 <sup>(2)</sup> .....	2,371.9	11.8	0.5

Notes:

(1) Assets classified as substandard or below.

(2) Preliminary.

Source: Financial Supervisory Service

In 2017, these banks posted an aggregate net profit of ₩11.2 trillion, compared to an aggregate net profit of ₩3.0 trillion in 2016, primarily due to decreased loan loss provisions and increased net interest income. In 2018, these banks posted an aggregate net profit of ₩15.6 trillion, compared to an aggregate net profit of ₩11.2 trillion in 2017, primarily due to increased net interest income and decreased loan loss provisions, which more than offset a decrease in net non-interest income. In 2019, these banks posted an aggregate net profit of ₩13.9 trillion, compared to an aggregate net profit of ₩15.6 trillion in 2018, primarily due to losses on investments in subsidiaries and associates in 2019 compared to gains on investments in subsidiaries and associates in 2018, which more than offset decreased loan loss provisions. In 2020, these banks posted an aggregate net profit of ₩12.1 trillion, compared to an aggregate net profit of ₩13.9 trillion in 2019, primarily due to increased loan loss provisions. Based on preliminary data, in 2021, these banks posted an aggregate net profit of ₩16.9 trillion,

compared to an aggregate net profit of ₩12.1 trillion in 2020, primarily due to the significant amount of gains recognised by The Korea Development Bank in connection with the exercise of its right to convert its convertible bonds issued by HMM Company Limited into common shares, which took place in June 2021, and to a lesser extent, increased net interest income and decreased loan loss provisions.

### ***Non-Bank Financial Institutions***

Non-bank financial institutions include:

- savings institutions, including trust accounts of banks, mutual savings banks, credit unions, mutual credit facilities, community credit co-operatives and postal savings;
- life insurance institutions; and
- credit card companies.

As of 31 December 2021, 79 mutual savings banks, 23 life insurance institutions, which includes joint venture life insurance institutions and wholly-owned subsidiaries of foreign life insurance companies, and eight credit card companies operated in the Republic.

### ***Money Markets***

In the Republic, the money markets consist of the call market and markets for a wide range of other short-term financial instruments, including treasury bills, monetary stabilisation bonds, negotiable certificates of deposits, repurchase agreements and commercial paper.

### ***Securities Markets***

On 27 January 2005, the Korea Exchange was established pursuant to the now repealed Korea Securities and Futures Trading Act by consolidating the Korea Stock Exchange, the Korea Futures Exchange, the KOSDAQ Stock Market, Inc., or the KOSDAQ, and the KOSDAQ Committee of the Korea Securities Dealers Association, which had formerly managed the KOSDAQ. There are three major markets operated by the Korea Exchange: the KRX KOSPI Market, the KRX KOSDAQ Market, and the KRX Derivatives Market. The Korea Exchange has two trading floors located in Seoul, one for the KRX KOSPI Market and one for the KRX KOSDAQ Market, and one trading floor in Busan for the KRX Derivatives Market. The Korea Exchange is a joint stock company with limited liability, the shares of which are held by (i) financial investment companies that were formerly members of the Korea Futures Exchange or the Korea Stock Exchange and (ii) the stockholders of the KOSDAQ. Currently, the Korea Exchange is the only stock exchange in Korea and is operated by membership, having as its members Korean financial investment companies and some Korean branches of foreign financial investment companies.

The Korea Exchange publishes the Korea Composite Stock Price Index every ten seconds, which is an index of all equity securities listed on the Korea Exchange. The Korea Composite Stock Price Index is computed using the aggregate value method, whereby the market capitalisations of all listed companies are aggregated, subject to certain adjustments, and this aggregate is expressed as a percentage of the aggregate market capitalisation of all listed companies as of the base date, 4 January 1980.

The following table shows the value of the Korea Composite Stock Price Index as of the dates indicated:

28 December 2017 .....	2,467.5
31 January 2018 .....	2,566.5
28 February 2018 .....	2,427.4
30 March 2018 .....	2,445.9

30 April 2018.....	2,515.4
31 May 2018.....	2,423.0
29 June 2018.....	2,326.1
31 July 2018.....	2,295.3
31 August 2018.....	2,322.9
28 September 2018.....	2,343.1
31 October 2018.....	2,029.7
30 November 2018.....	2,096.9
28 December 2018.....	2,041.0
31 January 2019.....	2,204.9
28 February 2019.....	2,195.4
29 March 2019.....	2,140.7
30 April 2019.....	2,203.6
31 May 2019.....	2,041.7
28 June 2019.....	2,130.6
31 July 2019.....	2,024.6
30 August 2019.....	1,967.8
30 September 2019.....	2,063.1
31 October 2019.....	2,083.5
29 November 2019.....	2,088.0
30 December 2019.....	2,197.7
31 January 2020.....	2,119.0
28 February 2020.....	1,987.0
31 March 2020.....	1,754.6
29 April 2020.....	1,947.6
29 May 2020.....	2,029.6
30 June 2020.....	2,108.3
31 July 2020.....	2,249.4
31 August 2020.....	2,326.2
29 September 2020.....	2,327.9
30 October 2020.....	2,267.2
30 November 2020.....	2,591.3
30 December 2020.....	2,873.5
29 January 2021.....	2,976.2
26 February 2021.....	3,013.0
31 March 2021.....	3,061.4
30 April 2021.....	3,147.9

31 May 2021 .....	3,203.9
30 June 2021 .....	3,296.7
30 July 2021.....	3,202.3
31 August 2021.....	3,199.3
30 September 2021 .....	3,068.8
29 October 2021 .....	2,970.7
30 November 2021 .....	2,839.0
30 December 2021 .....	2,977.7
28 January 2022.....	2,663.3
28 February 2022.....	2,699.2
31 March 2022.....	2,757.7
29 April 2022 .....	2,695.1
31 May 2022.....	2,685.9
30 June 2022 .....	2,332.6
29 July 2022 .....	2,451.5

Over the years, liquidity and credit concerns and volatility in the global financial markets have led to fluctuations in the stock prices of Korean companies. In recent years, there was significant volatility in the stock prices of Korean companies due to deteriorating market conditions domestically and abroad due to the ongoing COVID-19 pandemic. The index was 2,447.45 on 24 August 2022.

### ***Supervision System***

The Office of Bank Supervision, the Securities Supervisory Board, the Insurance Supervisory Board and all other financial sector regulatory bodies merged in January 1999 to form the Financial Supervisory Service. The Financial Services Commission acts as the executive body over the Financial Supervisory Service. The Financial Services Commission reports to, but operates independently of, the Prime Minister's office.

The Ministry of Economy and Finance focuses on financial policy and foreign currency regulations. The Bank of Korea manages monetary policy focusing on price stabilisation.

### ***Deposit Insurance System***

The Republic's deposit insurance system insures amounts on deposit with banks, non-bank financial institutions, securities companies and life insurance companies.

Since January 2001, deposits at any single financial institution are insured only up to ₩50 million per person regardless of the amount deposited.

The Government excluded certain deposits, such as repurchase agreements, from the insurance scheme, expanded the definition of unsound financial institutions to which the insurance scheme would apply and gradually increased the insurance premiums payable by insured financial institutions.

## Monetary Policy

### *The Bank of Korea*

The Bank of Korea was established in 1950 as Korea's central bank and the country's sole currency issuing bank. A seven-member Monetary Policy Committee, chaired by the Governor of The Bank of Korea, formulates and controls monetary and credit policies.

Inflation targeting is the basic system of operation for Korean monetary policy. The consumer price index is used as The Bank of Korea's target indicator. To achieve its established inflation target, the Monetary Policy Committee of The Bank of Korea determines and announces the "Bank of Korea Base Rate", the reference rate applied in transactions such as repurchase agreements between The Bank of Korea and its financial institution counterparts. The Bank of Korea uses open market operations as its primary instrument to keep the call rate in line with the Monetary Policy Committee's target rate. In addition, The Bank of Korea is able to establish policies regarding its lending to banks in Korea and their reserve requirements.

### *Interest Rates*

On 9 July 2010, The Bank of Korea raised the policy rate to 2.25% from 2.0%, which was further raised to 2.5% on 16 November 2010, in response to signs of inflationary pressures and the continued growth of domestic economy. On 13 January 2011, The Bank of Korea raised the policy rate to 2.75%, which was further increased to 3.0% on 10 March 2011 and to 3.25% on 10 June 2011, in response to inflationary pressures driven mainly by rises in the prices of petroleum products and farm products. The Bank of Korea lowered its policy rate to 3.0% from 3.25% on 12 July 2012, which was further lowered to 2.75% on 11 October 2012, 2.5% on 9 May 2013, 2.25% on 14 August 2014, 2.0% on 15 October 2014, 1.75% on 12 March 2015, 1.5% on 11 June 2015 and 1.25% on 9 June 2016, in order to address the sluggishness of the global and domestic economy. On 30 November 2017, The Bank of Korea raised its policy rate to 1.5% from 1.25%, which was further raised to 1.75% on 30 November 2018, in response to signs of inflationary pressures and the continued growth of the global and domestic economy. The Bank of Korea lowered its policy rate to 1.5% from 1.75% on 18 July 2019 and to 1.25% from 1.5% on 16 October 2019 to address the sluggishness of the global and domestic economy. On 16 March 2020, The Bank of Korea further lowered its policy rate to 0.75% from 1.25%, which was further lowered to 0.5% on 28 May 2020, in response to deteriorating economic conditions resulting from the COVID-19 pandemic. The Bank of Korea raised its policy rate from 0.50% to 0.75% on 26 August 2021, to 1.00% on 25 November 2021, to 1.25% on 14 January 2022, to 1.50% on 14 April 2022, to 1.75% on 26 May 2022 and to 2.25% on 13 July 2022 in response to rising levels of household debt and inflationary pressures.

With the deregulation of interest rates on banks' demand deposits on 2 February 2004, The Bank of Korea completed the interest rate deregulation based upon the "Four-Stage Interest Rate Liberalization Plan" announced in 1991. The prohibition on the payment of interest on ordinary checking accounts was, however, maintained.

### *Money Supply*

The following table shows the volume of the Republic's money supply:

	31 December				
	2017	2018	2019	2020	2021
	<i>(billions of Won)</i>				
Money Supply (M1) <sup>(1)</sup> .....	849,862.4	865,851.8	952,922.8	1,197,828.9	1,372,336.6
Quasi-money <sup>(2)</sup> .....	1,680,491.2	1,834,510.6	1,960,686.8	2,002,006.8	2,241,351.0
Money Supply (M2) <sup>(3)</sup> .....	2,530,353.6	2,700,362.4	2,913,609.6	3,199,835.7	3,613,687.6

	31 December				
	2017	2018	2019	2020	2021
	<i>(billions of Won)</i>				
Percentage Increase Over Previous Year .....	5.1%	6.7%	7.9%	9.8%	12.9%

Notes:

- (1) Consists of currency in circulation and demand and instant access savings deposits at financial institutions.
- (2) Includes time and instalment savings deposits, marketable instruments, yield-based dividend instruments and financial debentures, excluding financial instruments with a maturity of more than two years.
- (3) Money Supply (M2) is the sum of Money Supply (M1) and quasi-money.

Source: The Bank of Korea

### **Exchange Controls**

Authorised foreign exchange banks, as registered with the Ministry of Economy and Finance, handle foreign exchange transactions. The ministry has designated other types of financial institutions to handle foreign exchange transactions on a limited basis.

Korean laws and regulations generally require a report to either the Ministry of Economy and Finance, The Bank of Korea or authorised foreign exchange banks, as applicable, for issuances of international bonds and other instruments, overseas investments and certain other transactions involving foreign exchange payments.

In 1994 and 1995, the Government relaxed regulations of foreign exchange position ceilings and foreign exchange transaction documentation and created free Won accounts which may be opened by non-residents at Korean foreign exchange banks. The Won funds deposited into the free Won accounts may be converted into foreign currencies and remitted outside Korea without any governmental approval. In December 1996, after joining the OECD, the Republic freed the repatriation of investment funds, dividends and profits, as well as loan repayments and interest payments. The Government continues to reduce exchange controls in response to changes in the world economy, including the new trade regime under the WTO, anticipating that such foreign exchange reform will improve the Republic's competitiveness and encourage strategic alliances between domestic and foreign entities.

In September 1998, the National Assembly passed the Foreign Exchange Transactions Act, which became effective in April 1999 and has subsequently been amended numerous times. In principle, most currency and capital transactions, including, among others, the following transactions, have been liberalised:

- the investment in real property located overseas by Korean companies and financial institutions;
- the establishment of overseas branches and subsidiaries by Korean companies and financial institutions;
- the investment by non-residents in deposits and trust products having more than one year maturities; and
- the issuance of debentures by non-residents in the Korean market.

To minimise the adverse effects from further opening of the Korean capital markets, the Ministry of Economy and Finance is authorised to introduce a variable deposit requirement system to restrict the influx of short-term speculative funds.

The Government has also embarked on a second set of liberalisation initiatives starting in January 2001, under which ceilings on international payments for Korean residents have been eliminated, including overseas travel expenses, overseas inheritance remittances and emigration expenses. Overseas deposits, trusts, acquisitions of

foreign securities and other foreign capital transactions made by residents and the making of deposits in Korean currency by non-residents have also been liberalised. In line with the foregoing liberalisation, measures will also be adopted to curb illegal foreign exchange transactions and to stabilise the foreign exchange market.

Effective as of 1 January 2006, the Government liberalised the regulations governing “capital transactions”. The regulations provide that no regulatory approvals are required for any capital transactions. The capital transactions previously subject to approval requirements are now subject only to reporting requirements.

In January 2010, the Financial Supervisory Services released FX Derivative Transactions Risk Management Guideline to prevent over-hedging of foreign exchange risk by corporate investors. According to the guideline as amended in December 2014, if a corporate investor, other than a financial institution or a public enterprise, wishes to enter into a currency forward, currency option, foreign exchange swap or currency swap agreement with a bank, the bank is required to verify whether the corporate investor’s assets, liabilities or contracts face foreign exchange risks that could be mitigated by a currency forward, currency option, foreign exchange swap or currency swap agreement. In addition, the bank is required to ensure that the corporate investor’s risk hedge ratio, which is the ratio of the aggregate notional amount to the aggregate amount of risk, does not exceed 100%.

### ***Foreign Exchange***

The following table shows the exchange rate between the Won and the U.S. dollar (in Won per U.S. dollar) as announced by the Seoul Money Brokerage Services, Ltd. as of the dates indicated:

	<b>Won/U.S. Dollar Exchange Rate</b>
29 December 2017 .....	1,071.4
31 January 2018 .....	1,071.5
28 February 2018 .....	1,071.0
30 March 2018 .....	1,066.5
30 April 2018.....	1,076.2
31 May 2018.....	1,081.3
29 June 2018.....	1,121.7
31 July 2018 .....	1,116.7
31 August 2018.....	1,108.8
28 September 2018.....	1,112.7
31 October 2018 .....	1,140.6
30 November 2018 .....	1,121.8
31 December 2018 .....	1,118.1
31 January 2019 .....	1,117.2
28 February 2019 .....	1,117.8
29 March 2019 .....	1,137.8
30 April 2019.....	1,158.2
31 May 2019.....	1,190.0

	<b>Won/U.S. Dollar Exchange Rate</b>
28 June 2019.....	1,156.8
31 July 2019 .....	1,182.0
30 August 2019.....	1,215.2
30 September 2019.....	1,201.3
31 October 2019 .....	1,168.4
29 November 2019 .....	1,179.3
31 December 2019 .....	1,157.8
31 January 2020 .....	1,183.5
28 February 2020 .....	1,215.9
31 March 2020 .....	1,222.6
29 April 2020.....	1,225.2
29 May 2020.....	1,239.4
30 June 2020.....	1,200.7
31 July 2020 .....	1,191.4
31 August 2020.....	1,185.1
29 September 2020.....	1,173.5
30 October 2020 .....	1,133.4
30 November 2020 .....	1,104.4
31 December 2020 .....	1,088.0
29 January 2021 .....	1,114.6
26 February 2021 .....	1,108.4
31 March 2021 .....	1,133.5
30 April 2021.....	1,107.4
31 May 2021 .....	1,116.0
30 June 2021 .....	1,130.0
30 July 2021 .....	1,147.4
31 August 2021 .....	1,164.4
30 September 2021 .....	1,184.9
29 October 2021 .....	1,171.7
30 November 2021 .....	1,193.4
31 December 2021 .....	1,185.5
28 January 2022 .....	1,202.4
28 February 2022 .....	1,202.7
31 March 2022 .....	1,210.8

	<b>Won/U.S. Dollar Exchange Rate</b>
29 April 2022.....	1,269.4
31 May 2022 .....	1,245.8
30 June 2022 .....	1,299.4
29 July 2022 .....	1,304.0

During the period from 2 January 2008 through 16 April 2009, the value of the Won relative to the U.S. dollar declined by approximately 29.9%, due primarily to adverse economic conditions resulting from liquidity and credit concerns and volatility in the global credit and financial markets and repatriations by foreign investors of their investments in the Korean stock market. The exchange rate between the Won and the U.S. Dollar has fluctuated since then. In 2020, 2021 and in recent months, the value of the Won relative to the U.S. dollar fluctuated significantly, due primarily to the impact of the ongoing COVID-19 pandemic. The market average exchange rate was Won 1,341.8 to US\$1.00 on 24 August 2022.

## **Balance of Payments and Foreign Trade**

### ***Balance of Payments***

Balance of payments figures measure the relative flow of goods, services and capital into and out of the country as represented in the current balance and the capital balance. The current balance tracks a country's trade in goods and services and transfer payments and measures whether a country is living within its income from trading and investments. The capital balance covers all transactions involving the transfer of capital into and out of the country, including loans and investments. The overall balance represents the sum of the current and capital balances. An overall balance surplus indicates a net inflow of foreign currencies, thereby increasing demand for and strengthening the local currency. An overall balance deficit indicates a net outflow of foreign currencies, thereby decreasing demand for and weakening the local currency. The financial account mirrors the overall balance. If the overall balance is positive, the surplus, which represents the nation's savings, finances the overall deficit of the country's trading partners. Accordingly, the financial account will indicate cash outflows equal to the overall surplus. If, however, the overall balance is negative, the nation has an international deficit which must be financed. Accordingly, the financial account will indicate cash inflows equal to the overall deficit.

The following table sets out certain information with respect to the Republic's balance of payments:

<b>Balance of Payments<sup>(1)</sup></b>					
<b>Classification</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021<sup>(4)</sup></b>
	<i>(millions of dollars)</i>				
Current Account .....	75,230.9	77,466.5	59,676.1	75,902.2	88,302.2
Goods .....	113,592.9	110,086.8	79,812.1	80,604.8	76,207.2
Exports <sup>(2)</sup> .....	580,310.2	626,266.5	556,667.9	517,909.3	650,014.6
Imports <sup>(2)</sup> .....	466,717.3	516,179.7	476,855.8	437,304.5	573,807.4
Services .....	(36,734.1)	(29,369.4)	(26,845.3)	(14,670.1)	(3,108.3)
Income.....	5,336.9	4,901.9	12,856.0	13,486.9	19,328.2

Classification	2017	2018	2019	2020	2021 <sup>(4)</sup>
			(millions of dollars)		
Current Transfers .....	(6,964.8)	(8,152.8)	(6,146.7)	(3,519.4)	(4,124.9)
Capital and Financial Account.....	84,489.6	76,790.1	58,857.6	80,996.4	76,626.1
Capital Account.....	(26.8)	316.7	(169.3)	(386.3)	(154.3)
Financial Account <sup>(3)</sup> .....	84,516.4	76,473.4	59,026.9	81,382.7	76,780.4
Net Errors and Omissions .....	9,312.3	(1,309.8)	(479.9)	5,866.8	(11,367.5)

Notes:

- (1) Figures are prepared based on the sixth edition of the Balance of Payment Manual published by International Monetary Fund in December 2010 and implemented by the Government in December 2013. In December 2018, The Bank of Korea revised the Republic's balance of payments information to capture new economic activities and reflect the changes in raw data.
- (2) These entries are derived from trade statistics and are valued on a free on board basis, meaning that the insurance and freight costs are not included.
- (3) Includes borrowings from the IMF, syndicated bank loans and short-term borrowings.
- (4) Preliminary.

Source: The Bank of Korea

The current account surplus in 2020 increased to US\$75.9 billion from the current account surplus of US\$59.7 billion in 2019, primarily due to a decrease in deficit from the services account, and to a lesser extent, a decrease in deficit from the current transfers account and an increase in surplus from the goods account. Based on preliminary data, the current account surplus in 2021 increased to US\$88.3 billion from the current account surplus of US\$75.9 billion in 2020, primarily due to a decrease in deficit from the services account and an increase in surplus from the income account, the effect of which was offset in part by a decrease in surplus from the goods account. Based on preliminary data, the current account surplus in the first quarter of 2022 decreased to US\$15.1 billion from the current account surplus of US\$22.3 billion in the corresponding period of 2021, primarily due to decreases in surpluses from the goods account and the income account, the effect of which was offset in part by a change from a deficit to a surplus from the services account.

### **Foreign Direct Investment**

Since 1960, the Government has adopted a broad range of related laws, administrative rules and regulations that provide a framework for the conduct and regulation of foreign investment activities. In September 1998, the Government promulgated the Foreign Investment Promotion Act, or the FIPA, which replaced previous foreign direct investment related laws, rules and regulations, to promote inbound foreign investments by providing incentives to, and facilitating investment activities in the Republic by, foreign nationals. The FIPA prescribes, among others, procedural requirements for inbound foreign investments, incentives for foreign investments such as tax reductions, and requirements relating to designation and development of foreign investment target regions. The Government believes that providing a stable and receptive environment for foreign direct investment will accelerate the inflow of foreign capital, technology and management techniques.

The following table sets forth information regarding annual foreign direct investment in the Republic for the periods indicated.

### Foreign Direct Investment

	2017	2018	2019	2020	2021 <sup>(2)</sup>
			<i>(billions of dollars)</i>		
Contracted and Reported Investment					
Greenfield Investment <sup>(1)</sup> .....	15.7	20.0	15.9	14.5	18.1
Merger & Acquisition .....	7.2	6.9	7.4	6.2	11.4
Total .....	22.9	26.9	23.3	20.7	29.5
Actual Investment .....	13.8	17.3	13.4	11.4	18.0

Notes:

(1) Includes building new factories and operational facilities.

(2) Preliminary.

Source: Ministry of Trade, Industry and Energy

In 2020, the contracted and reported amount of foreign direct investment in the Republic decreased to US\$20.7 billion from US\$23.3 billion in 2019, primarily due to a decrease in foreign investment in the manufacturing sector to US\$5.9 billion in 2020 from US\$8.2 billion in 2019.

Based on preliminary data, in 2021, the contracted and reported amount of foreign direct investment in the Republic increased to US\$29.5 billion from US\$20.7 billion in 2020, primarily due to an increase in foreign investment in the services sector to US\$23.6 billion in 2021 from US\$14.4 billion in 2020.

The following table sets forth information regarding the source of foreign direct investment by region and country for the periods indicated:

### Foreign Direct Investment by Region and Country

	2017	2018	2019	2020	2021
			<i>(billions of dollars)</i>		
North America					
U.S.A. ....	4.7	5.9	6.8	5.3	5.3
Others .....	1.6	1.9	1.7	3.5	1.6
	6.3	7.8	8.6	8.8	6.9
Asia					
Japan .....	1.8	1.3	1.4	0.8	1.2
Hong Kong .....	1.8	1.5	1.9	1.1	0.6
Singapore .....	1.8	1.5	1.3	2.3	4.2
China .....	0.8	2.7	1.0	2.0	1.9
Others .....	2.0	2.4	1.0	0.4	1.2
	8.2	9.4	6.6	6.6	9.1
Europe					
Netherlands .....	1.7	1.4	1.7	0.6	1.0
England .....	2.2	1.2	2.1	0.7	0.8
Germany .....	0.7	0.5	0.4	0.5	2.8

	2017	2018	2019	2020	2021
			(billions of dollars)		
France.....	0.3	0.7	0.1	0.2	0.2
Others .....	2.4	5.2	3.1	2.8	8.0
	7.3	9.0	7.4	4.8	12.8
Others regions and countries.....	1.1	0.6	0.7	0.5	0.7
Total .....	22.9	26.9	23.3	20.7	29.5

Source: Ministry of Trade, Industry and Energy

### Trade Balance

Trade balance figures measure the difference between a country's exports and imports. If exports exceed imports the country has a trade balance surplus while if imports exceed exports the country has a deficit. A deficit, indicating that a country's receipts from abroad fall short of its payments to foreigners, must be financed, rendering the country a debtor nation. A surplus, indicating that a country's receipts exceed its payments to foreigners, allows the country to finance its trading partners' net deficit to the extent of the surplus, rendering the country a creditor nation.

The following table summarises the Republic's trade balance for the periods indicated:

Trade Balance						
	Exports <sup>(1)</sup>	As % of GDP <sup>(2)</sup>	Imports <sup>(1)</sup>	As % of GDP <sup>(2)</sup>	Balance of Trade	Exports as % of Imports
	<i>(billions of dollars, except percentages)</i>					
2017.....	573.7	35.3%	478.5	29.5%	95.2	119.9
2018.....	604.9	35.2%	535.2	31.1%	69.7	113.0
2019.....	542.2	33.0%	503.3	30.7%	38.9	107.7
2020.....	512.5	31.3%	467.6	28.5%	44.9	109.6
2021 <sup>(3)</sup> .....	644.14	35.8%	615.1	34.2%	29.3	104.8

Notes:

- (1) These entries are derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods includes insurance and freight cost.
- (2) At current market prices.
- (3) Preliminary.

Source: The Bank of Korea; Korea Customs Service

The Republic, due to its lack of natural resources, relies on extensive trading activity for growth. The country meets virtually all domestic requirements for petroleum, wood and rubber with imports, as well as much of its coal and iron needs. Exports consistently represent a high percentage of GDP and, accordingly, the international economic environment is of crucial importance to the Republic's economy. See "—The Economy—Worldwide Economic and Financial Difficulties".

The following tables give information regarding the Republic's exports and imports by major commodity groups:

### Exports by Major Commodity Groups (C.I.F.)<sup>(1)</sup>

	2017	As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(2)</sup>	As % of 2021 Total <sup>(2)</sup>
	<i>(billions of dollars, except percentages)</i>									
Foods & Consumer Goods.....	7.8	1.4	7.9	1.3	8.2	1.5	8.6	1.7	9.8	1.5
Raw Materials and Fuels .....	43.1	7.5	55.1	9.1	48.8	9.0	32.1	6.3	51.4	8.0
Petroleum & Derivatives.....	35.4	6.2	47.0	7.8	41.3	7.6	24.7	4.8	38.8	6.0
Others .....	7.7	1.3	8.1	1.3	7.5	1.4	7.4	1.4	12.6	2.0
Light Industrial Products .....	36.0	6.3	35.8	5.9	34.2	6.3	32.4	6.3	35.3	5.5
Heavy & Chemical Industrial Products .....	486.8	84.9	506.1	83.7	451.0	83.2	439.3	85.7	548.0	85.0
Electronic & Electronic Products	192.0	33.5	214.8	35.5	171.4	31.6	178.5	34.8	221.8	34.4
Chemicals & Chemical Products .	65.7	11.5	74.0	12.2	67.4	12.4	66.6	13.0	91.9	14.3
Metal Goods .....	46.9	8.2	48.1	8.0	44.1	8.1	39.6	7.7	52.6	8.2
Machinery & Precision .....										
Equipment .....	63.3	11.0	69.4	11.5	67.6	12.5	63.4	12.4	70.9	11.0
Transport Equipment .....	108.8	19.0	87.4	14.4	87.7	16.2	77.6	15.1	94.2	14.6
Passenger Cars ....	38.8	6.8	38.2	6.3	40.5	7.5	35.6	6.9	44.3	6.9
Ship & Boat.....	41.4	7.2	20.7	3.4	19.5	3.6	19.2	3.7	22.4	3.5
Others.....	28.6	5.0	28.4	4.7	27.7	5.1	22.8	4.4	27.5	4.3
Others .....	10.1	1.8	12.5	2.1	12.7	2.3	13.6	2.7	16.6	2.6
Total.....	573.7	100.0	604.9	100.0	542.2	100.0	512.5	100.0	644.4	100.0

Notes:

(1) These entries are derived from customs clearance statistics. C.I.F. means that the price of goods includes insurance and freight costs.

(2) Preliminary.

Source: The Bank of Korea; Korea Customs Service

### Imports by Major Commodity Groups (C.I.F.)<sup>(1)</sup>

	2017	As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(2)</sup>	As % of 2021 Total <sup>(2)</sup>
	<i>(billions of dollars, except percentages)</i>									
Industrial Materials and Fuels.....	233.1	48.7	279.0	52.1	254.0	50.5	206.3	44.1	302.6	49.2
Crude Petroleum ....	59.6	12.5	80.4	15.0	70.3	14.0	44.5	9.5	67.0	10.9
Mineral .....	20.3	4.2	22.0	4.1	21.7	4.3	21.4	4.6	33.3	5.4
Chemicals .....	44.0	9.2	50.0	9.3	47.0	9.3	46.4	9.9	60.4	9.8
Iron & Steel Products .....	20.3	4.2	19.7	3.7	19.8	3.9	15.2	3.3	22.2	3.6
Non-ferrous Metal .	12.1	2.5	12.8	2.4	12.0	2.4	11.7	2.5	18.4	3.0

		As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(2)</sup>	As % of 2021 Total <sup>(2)</sup>
	2017									
<i>(billions of dollars, except percentages)</i>										
Others .....	76.8	16.1	94.1	17.6	83.2	16.5	67.1	14.3	101.3	16.5
Capital Goods .....	171.8	35.9	174.6	32.6	164.9	32.8	177.1	37.9	212.8	34.6
Machinery & Precision Equipment .....	63.1	13.2	60.5	11.3	50.7	10.1	57.9	12.4	70.0	11.4
Electric & Electronic Machines .....	95.8	20.0	100.4	18.8	100.4	20.0	105.1	22.5	127.6	20.7
Transport Equipment .....	10.8	2.3	11.5	2.1	11.6	2.3	11.9	2.5	13.0	2.1
Others .....	2.1	0.4	2.2	0.4	2.1	0.4	2.3	0.5	2.2	0.4
Consumer Goods.....	73.6	15.4	81.6	15.2	84.5	16.8	84.2	18.0	99.6	16.2
Cereals.....	6.0	1.3	6.8	1.3	6.9	1.4	7.1	1.5	8.9	1.4
Goods for Direct Consumption.....	19.7	4.1	22.3	4.2	22.2	4.4	22.3	4.8	25.7	4.2
Consumer Durable Goods .....	30.0	6.3	32.2	6.0	34.5	6.9	34.9	7.5	42.2	6.9
Consumer Nondurable Goods .	17.9	3.7	20.3	3.8	20.9	4.2	20.0	4.3	22.8	3.7
Total.....	478.5	100.0	535.2	100.0	503.3	100.0	467.6	100.0	615.0	100.0

Notes:

(1) These entries are derived from customs clearance statistics. C.I.F. means that the price of goods includes insurance and freight costs.

(2) Preliminary.

Source: The Bank of Korea; Korea Customs Service

In 2017, the Republic recorded a trade surplus of US\$95.2 billion. Exports increased by 15.8% to US\$573.7 billion in 2017 from US\$495.4 billion in 2016, primarily due to increased demand for semiconductors and steel products. Imports increased by 17.8% to US\$478.5 billion in 2017 from US\$406.2 billion in 2016, primarily due to an increase in oil prices, which also led to increased unit prices of other major raw materials, and increased imports of machinery, precision equipment and electronic machines.

In 2018, the Republic recorded a trade surplus of US\$69.7 billion. Exports increased by 5.4% to US\$604.9 billion in 2018 from US\$573.7 billion in 2017, primarily due to increased demand for semiconductors and petroleum products. Imports increased by 11.8% to US\$535.2 billion in 2018 from US\$478.5 billion in 2017, primarily due to an increase in oil prices, which also led to increased unit prices of other major raw materials.

In 2019, the Republic recorded a trade surplus of US\$38.9 billion. Exports decreased by 10.4% to US\$542.2 billion in 2019 from US\$604.9 billion in 2018, primarily due to a significant decrease in semiconductor prices. Imports decreased by 6.0% to US\$503.3 billion in 2019 from US\$535.2 billion in 2018, primarily due to a decrease in oil prices, which also led to decreased unit prices of other major raw materials.

In 2020, the Republic recorded a trade surplus of US\$44.9 billion. Exports decreased by 5.5% to US\$512.5 billion in 2020 from US\$542.2 billion in 2019, primarily due to a slowdown of the global economy resulting from the COVID-19 pandemic. Imports decreased by 7.1% to US\$467.6 billion in 2020 from US\$503.3 billion in 2019, primarily due to a decrease in oil prices, which also led to decreased unit prices of other major raw materials, as well as decreased domestic consumption, which were mainly attributed to the ongoing COVID-19 pandemic.

Based on preliminary data, the Republic recorded a trade surplus of US\$29.4 billion in 2021. Exports increased by 25.7% to US\$644.4 billion in 2021 from US\$512.5 billion in 2020, primarily due to a recovery of the global economy from the COVID-19 pandemic. Imports increased by 31.5% to US\$615.0 billion in 2021 from US\$467.6 billion in 2020, primarily due to an increase in domestic consumption as well as an increase in oil prices, which also led to increased unit prices of other major raw materials.

Based on preliminary data, the Republic recorded a trade deficit of US\$10.3 billion in the first half of 2022. Exports increased by 15.6% to US\$350.5 billion in the first half of 2022 from US\$303.1 billion in the corresponding period of 2021, primarily due to an improvement in the domestic economic conditions of the Republic's major trading partners. Imports increased by 26.2% to US\$360.8 billion in the first half of 2022 from US\$285.8 billion in the corresponding period of 2021, primarily due to an increase in oil prices, which also led to increased unit prices of other major raw materials.

The following table sets forth the Republic's exports trading partners:

Exports										
	2017	As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(1)</sup>	As % of 2021 Total <sup>(1)</sup>
	(millions of dollars, except percentages)									
China.....	142,120.0	24.8	162,125.1	26.8	136,202.5	25.1	132,565.4	25.9	162,913.0	25.3
United States .....	68,609.7	12.0	72,719.9	12.0	73,343.9	13.5	74,115.8	14.5	95,902.0	14.9
Japan .....	26,816.1	4.7	30,528.6	5.0	28,420.2	5.2	25,097.7	4.9	30,061.8	4.7
Hong Kong.....	39,112.3	6.8	45,996.4	7.6	31,912.9	5.9	30,653.8	6.0	37,467.1	5.8
Singapore.....	11,651.9	2.0	11,782.2	1.9	12,768.0	2.4	9,828.4	1.9	14,148.5	2.2
Vietnam .....	47,753.8	8.3	48,622.1	8.0	48,177.7	8.9	48,510.6	9.5	56,728.5	8.8
Taiwan .....	14,898.4	2.6	20,783.5	3.4	15,666.3	2.9	16,465.4	3.2	24,285.3	3.8
India.....	15,055.5	2.6	15,606.2	2.6	15,096.3	2.8	11,937.3	2.3	15,603.3	2.4
Indonesia.....	8,403.7	1.5	8,833.2	1.5	7,650.1	1.4	6,312.9	1.2	8,550.3	1.3
Mexico.....	10,932.6	1.9	11,458.2	1.9	10,927.0	2.0	8,241.0	1.6	11,290.2	1.8
Australia.....	19,861.6	3.5	9,610.4	1.6	7,890.6	1.5	6,188.5	1.2	9,750.5	1.5
Russia .....	6,906.6	1.2	7,320.9	1.2	7,774.1	1.4	6,900.0	1.3	9,979.5	1.5
Germany .....	8,483.8	1.5	9,372.7	1.5	8,685.7	1.6	9,576.1	1.9	11,109.9	1.7
Others <sup>(1)</sup> .....	153,088.4	26.7	150,100.2	24.8	137,717.3	25.4	126,395.8	24.6	156,610.5	24.3
Total.....	573,694.4	100.0	604,859.7	100.0	542,232.6	100.0	512,788.7	100.0	644,400.4	100.0

Notes:

(1) Preliminary.

(2) Includes more than 200 countries and regions.

Source: The Bank of Korea; Korea Customs Service

The following table sets forth the Republic's imports trading partners:

Imports										
	2017	As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(1)</sup>	As % of 2021 Total <sup>(1)</sup>
	(millions of dollars, except percentages)									
China.....	97,860.1	20.5	106,488.6	19.9	107,228.7	21.3	108,884.6	23.3	138,628.1	22.5

		As % of 2017 Total	2018	As % of 2018 Total	2019	As % of 2019 Total	2020	As % of 2020 Total	2021 <sup>(1)</sup>	As % of 2021 Total <sup>(1)</sup>
	2017									
<i>(millions of dollars, except percentages)</i>										
Japan .....	55,124.7	11.5	54,603.7	10.2	47,580.9	9.5	46,023.0	9.8	54,642.2	8.9
United States .....	50,749.4	10.6	58,868.3	11.0	61,878.6	12.3	57,492.2	12.3	73,213.4	11.9
Saudi Arabia .....	19,590.5	4.1	26,335.8	4.9	21,840.6	4.3	15,979.6	3.4	24,271.3	3.9
Qatar .....	11,267.1	2.4	16,293.6	3.0	13,036.6	2.6	7,562.1	1.6	11,611.1	1.9
Australia .....	19,159.7	4.0	20,718.6	3.9	20,608.2	4.1	18,707.1	4.0	32,918.0	5.4
Germany .....	19,748.7	4.1	20,854.0	3.9	19,936.9	4.0	20,680.9	4.4	21,996.3	3.6
Kuwait .....	9,594.0	2.0	12,794.3	2.4	10,771.1	2.1	5,827.9	1.2	8,253.9	1.3
Taiwan .....	18,073.0	3.8	16,738.4	3.1	15,717.7	3.1	17,837.0	3.8	23,485.8	3.8
United Arab Emirates..	9,557.1	2.0	9,287.4	1.7	8,991.1	1.8	5,692.7	1.2	7,318.7	1.2
Indonesia .....	9,571.0	2.0	11,161.2	2.1	8,819.8	1.8	7,594.7	1.6	10,725.1	1.7
Malaysia .....	8,714.7	1.8	10,205.7	1.9	9,279.9	1.8	8,892.6	1.9	10,456.2	1.7
Others <sup>(2)</sup> .....	149,468.3	31.2	170,852.9	31.9	157,652.8	31.3	146,458.4	31.3	215,214.6	35.0
Total .....	478,478.3	100.0	535,202.4	100.0	503,342.9	100.0	467,632.8	100.0	615,093.4	100.0

Notes:

(1) Preliminary.

(2) Includes more than 200 countries and regions.

Source: The Bank of Korea; Korea Customs Service

The outbreak of severe health epidemics in Korea and various parts of the world, including the ongoing COVID-19 pandemic, raises significant uncertainty about prospects for international trade and economic growth for affected countries, as well as world economic prospects in general. Global economic uncertainties in relation to COVID-19, including uncertainty due to the extent and effectiveness of extensive control measures and vaccination programmes, among others, are expected to continue in 2022. Although there have been mixed signs of recovery in the domestic and global economy resulting from the availability of COVID-19 vaccinations and gradual normalisation of business activities, the extent to which the COVID-19 pandemic affects international trade is highly uncertain and difficult to predict. In order to contain further spread of such epidemics and to prevent the outbreak of similar epidemics in the future, the Government continues to cooperate actively with regional and international efforts to develop and implement various measures to combat such outbreaks. See “—The Economy—Worldwide Economic and Financial Difficulties”.

In 2020, 2021 and in recent months, the value of the Won relative to the U.S. dollar and Japanese Yen has fluctuated widely, in particular due to the impact of the ongoing COVID-19 pandemic. See “—The Economy—Worldwide Economic and Financial Difficulties”. An appreciation of the Won against the U.S. dollar and Japanese Yen increases the Won value of the Republic’s export sales and diminishes the price-competitiveness of export goods in foreign markets in U.S. dollar and Japanese Yen terms, respectively. However, it also decreases the cost of imported raw materials in Won terms and the cost in Won of servicing the Republic’s U.S. dollar and Japanese Yen denominated debt. In general, when the Won appreciates, export dependent sectors of the Korean economy, including automobiles, electronics and shipbuilding, suffer from the resulting pressure on the price-competitiveness of export goods, which may lead to reduced profit margins and loss in market share, more than offsetting a decrease in the cost of imported raw materials. If the export dependent sectors of the Korean economy suffer reduced profit margins or a net loss, it could result in a material adverse effect on the Korean economy.

Since the Government announced its plans to pursue free trade agreements, or FTAs, in 2003, the Republic has entered into FTAs with key trading partners. The Republic has had bilateral FTAs in effect with Chile since 2004, Singapore since 2006, India since 2010, Peru since 2011, the United States since 2012, Turkey since 2013, Australia since 2014, Canada, China, New Zealand and Vietnam since 2015, Colombia since July 2016 and the United Kingdom since January 2021. The Republic is currently in negotiations with a number of other key trading partners. In addition, the Republic has had regional FTAs in effect with the European Free Trade Association since 2006, the Association of Southeast Asian Nations since 2009, the European Union since 2011, with each of Panama, Costa Rica, Guatemala, Honduras, El Salvador and Nicaragua since 2021 and with the Regional Comprehensive Economic Partnership since 2022, and is currently negotiating additional regional FTAs. The Republic and Turkey have completed revisions to their bilateral FTA, which became effective in August 2018. The Republic and the United States have also completed revisions to their bilateral FTA, which became effective in January 2019.

### ***Non-Commodities Trade Balance***

The Republic had non-commodities trade deficits of US\$38.4 billion in 2017, US\$32.6 billion in 2018, US\$20.1 billion in 2019 and US\$4.7 billion in 2020. Based on preliminary data, the Republic had a non-commodities trade surplus of US\$12.1 billion in 2021.

### ***Foreign Currency Reserves***

The foreign currency reserves are external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs and for other related purposes. The following table shows the Republic's total official foreign currency reserves:

Total Official Reserves					
	31 December				
	2017	2018	2019	2020	2021
	(millions of dollars)				
Gold.....	\$4,794.8	\$4,794.8	\$4,794.8	\$4,794.8	\$4,794.8
Foreign Exchange <sup>(1)</sup> .....	379,476.6	393,332.5	397,876.1	430,117.2	438,319.2
Total Gold and Foreign Exchange .....	384,271.3	398,127.2	402,670.9	434,912.0	443,114.0
Reserve Position at IMF .....	1,621.1	2,140.4	2,792.9	4,815.3	4,634.9
Special Drawing Rights .....	3,374.3	3,426.6	3,352.4	3,370.8	15,369.5
Total Official Reserves .....	\$389,266.7	\$403,694.3	\$408,816.1	\$443,098.1	\$463,118.4

Note:

(1) More than 95% of the Republic's foreign currency reserves are comprised of convertible foreign currencies.

Source: The Bank of Korea; International Monetary Fund

The Government's foreign currency reserves increased to US\$262.2 billion as of 31 December 2007 from US\$8.9 billion as of 31 December 1997, primarily due to continued balance of trade surpluses and capital inflows. In 2008, the Government's foreign currency reserves decreased, falling to US\$201.2 billion as of 31 December 2008, partially as a result of the Government's use of the foreign currency reserve to provide foreign currency liquidity to Korean financial institutions. The Government's foreign currency reserves increased to US\$389.3 billion as of 31 December 2017, US\$403.7 billion as of 31 December 2018, US\$408.8 billion as of 31 December 2019, US\$443.1 billion as of 31 December 2020 and US\$463.1 billion as of 31 December 2021,

primarily due to continued trade surpluses and capital inflows. The amount of the Government's foreign currency reserve was US\$438.3 billion as of 30 June 2022.

### **Government Finance**

The Ministry of Economy and Finance prepares the Government budget and administers the Government's finances.

The Government's fiscal year commences on 1 January. The Government must submit the budget, which is drafted by the Minister of Economy and Finance and approved by the President of the Republic, to the National Assembly not later than 90 days prior to the start of the fiscal year and may submit supplementary budgets revising the original budget at any time during the fiscal year.

2020 budgeted revenues increased by 1.0% to ₩450.9 trillion from ₩446.4 trillion in 2019, led by an increase in budgeted tax revenues (including social security contributions and tax on property). 2020 budgeted expenditures and net lending increased by 9.4% to ₩481.4 trillion from ₩439.9 trillion in 2019, led by increases in budgeted expenditures on economic growth (including job creation, research and development and support for start-ups and small businesses), social security, welfare services for senior citizens, unemployed people and temporary workers, and public housing. The 2020 budget anticipated a ₩30.5 trillion budget deficit.

2021 budgeted revenues remained relatively stable at ₩450.9 trillion from 2020. 2021 budgeted expenditures and net lending increased by 9.3% to ₩526.3 trillion from ₩481.4 trillion in 2020, led by increases in budgeted expenditures on recovery from the COVID-19 pandemic (including support for individuals and businesses adversely impacted by the COVID-19 pandemic, procurement of COVID-19 vaccines and enhancement of medical facilities and other infrastructure, among others) and revitalisation of the economy (public housing, job creation, research and development, social security and welfare services, among others). The 2021 budget anticipated a ₩75.4 trillion budget deficit.

2022 budgeted revenues increased by 14.8% to ₩517.7 trillion from ₩450.9 trillion in 2021, led by an increase in budgeted tax revenues (including taxes on income, profits and capital gains as well as taxes on goods and services). 2022 budgeted expenditures and net lending increased by 8.6% to ₩571.8 trillion from ₩526.3 trillion in 2021, led by increases in budgeted expenditures on recovery from the COVID-19 pandemic (including support for small businesses) and revitalisation of the economy. The 2022 budget anticipated a ₩54.1 trillion budget deficit.

In March 2020, the National Assembly approved a supplementary budget for 2020 in the amount of ₩11.7 trillion as part of the Government's efforts to mitigate adverse effects on the Korean economy resulting from the ongoing COVID-19 pandemic. See “—The Economy—Worldwide Economic and Financial Difficulties”. In April 2020, the National Assembly approved the second supplementary budget in the amount of ₩7.6 trillion, which amount was subsequently increased to ₩12.2 trillion, and in July 2020, the National Assembly approved the third supplementary budget in the amount of ₩35.1 trillion. In September 2020, the National Assembly approved the fourth supplementary budget amounting to ₩7.8 trillion, and the Government announced its COVID-19 relief package plan amounting to ₩9.4 trillion in December 2020, following a resurgence of COVID-19 cases in Korea. In March 2021, the National Assembly approved the first 2021 supplementary budget in the amount of ₩14.9 trillion to be spent on initiatives for relief from the COVID-19 pandemic, and in July 2021, the National Assembly approved the second supplementary budget of 2021 amounting to ₩34.9 trillion, mainly to provide relief packages to small businesses and direct payments to eligible individuals. In December 2021, the National Assembly approved the Republic's budget for 2022 in the amount of ₩607.7 trillion, a significant portion of which is expected to be used for measures to continue to mitigate the adverse effects of the COVID-19 pandemic on the Korean economy. In February 2022, the National Assembly approved a 2022 supplementary budget in the amount of ₩16.9 trillion as part of the Government's continuing efforts to support small businesses and vulnerable groups as well as strengthen disease control measures amid the ongoing

COVID-19 pandemic. In May 2022, the National Assembly approved the second supplementary budget in the amount of ₩62 trillion, most of which is expected to be used to compensate small businesses and self-employed individuals to compensate for losses incurred due to the COVID-19 restrictions.

These supplementary budgets (including relief packages), the largest of their kind drawn up in response to an outbreak of an infectious disease in Korea, focus on the provision of financial support for certain industries that are most vulnerable to, or adversely impacted by, the COVID-19 pandemic, such as tourism, aviation, shipping, logistics and food services, among others. The Government has used, and will continue to use, the supplementary budgets for the following purposes: (i) provision of loans and guarantees for small businesses, (ii) relief packages and household support, including daycare vouchers and emergency livelihood support, (iii) disease prevention (including purchases and administration of vaccines), testing and treatment, (iv) various forms of financial support for local communities most affected by the COVID-19 pandemic and (v) measures to revitalise the economy from the impact of the COVID-19 pandemic. The supplementary budgets have been, and will continue to be, funded through the issuance of treasury bonds by the Government, The Bank of Korea's unappropriated surplus and other surplus funds available to the Government, among others.

Any significant increase in additional spending measures as stipulated by the supplementary budgets (including relief packages) may lead to a budget deficit for 2022, which could result in a deterioration in the Government's fiscal position and an increase in borrowings. The impact of such effects is highly uncertain and will depend on, among others, the speed and extent of the economic recovery in Korea and internationally, which in turn will likely depend significantly on the scope and duration of the ongoing COVID-19 pandemic.

The following table shows consolidated Government revenues and expenditures:

#### Consolidated Central Government Revenues and Expenditures

	Actual					Budget		
	2017	2018	2019	2020	2022 <sup>(2)</sup>	2020	2021	2022 <sup>(1)</sup>
	<i>(billions of Won)</i>							
Total Revenues.....	403,839	438,262	443,853	446,628	537,619	450,873	450,905	517,701
Current Revenues.....	400,659	435,558	441,148	443,694	534,999	447,925	447,865	514,696
Total Tax Revenues.....	325,845	358,424	363,005	360,129	422,182	365,389	359,775	424,050
Taxes on income, profits and capital gains.....	134,242	155,399	155,736	148,622	184,509	152,837	143,121	180,740
Social security contributions.....	60,460	64,854	69,550	74,583	78,104	73,392	77,032	80,666
Tax on property.....	12,945	15,473	15,474	22,735	31,392	16,013	19,300	28,047
Taxes on goods and services.....	95,535	99,056	98,614	91,047	99,840	98,154	95,658	106,738
Taxes on international trade and transaction.....	8,529	8,815	7,882	7,059	8,227	8,791	8,347	8,735
Other tax.....	14,133	14,828	15,748	16,084	20,110	16,202	16,316	19,124
Non-Tax Revenues.....	74,814	77,134	78,143	83,565	112,818	82,536	88,091	90,646
Operating surpluses of departmental enterprise sales and property income.....	27,692	28,616	29,345	33,571	56,664	31,026	32,791	34,628
Administration fees & charges and non-industrial sales.....	9,067	9,004	10,181	9,929	10,865	10,355	10,724	11,402
Fines and forfeits.....	23,769	24,455	22,554	23,583	26,993	24,643	26,950	25,501

	Actual					Budget		
	2017	2018	2019	2020	2022 <sup>(2)</sup>	2020	2021	2022 <sup>(1)</sup>
	<i>(billions of Won)</i>							
Contributions to government employee pension fund .....	12,311	13,206	13,523	13,876	14,918	13,944	15,385	16,633
Current revenue of non-financial public enterprises .....	1,974	1,853	2,540	2,606	3,378	2,568	2,241	2,483
Capital Revenues .....	3,180	2,703	2,705	2,934	2,620	2,948	3,040	3,006
Total Expenditures and Net Lending .....	379,809	407,099	455,850	517,781	568,013	481,352	526,292	571,814
Total Expenditures .....	363,671	389,610	436,698	489,966	537,934	460,044	496,661	546,446
Current Expenditures .....	332,719	360,176	387,100	455,098	502,091	426,721	459,333	506,262
Expenditure on goods and service .....	67,536	71,459	60,196	79,460	88,144	85,521	94,636	94,814
Interest payment .....	13,976	14,287	13,837	14,452	15,431	15,525	17,254	17,928
Subsidies and other current transfers .....	248,513	272,080	309,575	357,295	395,726	321,672	343,636	389,599
Current expenditure of non-financial public enterprises .....	2,694	2,350	3,492	3,891	2,790	4,003	3,807	3,922
Capital Expenditures .....	30,952	29,434	49,598	34,868	35,842	33,323	37,328	40,184
Net Lending .....	16,138	17,489	19,152	27,815	30,079	21,288	29,631	25,369

Note:

(1) Preliminary.

Source: Ministry of Economy and Finance; The Bank of Korea; Korea National Statistical Office

The consolidated Government account consists of a General Account, Special Accounts (including a non-financial public enterprise special account) and Public Funds. The Government segregates the accounts of certain functions of the Government into Special Accounts and Public Funds for more effective administration and fiscal control. The Special Accounts and Public Funds relate to business type activities, such as economic development, road and railway construction and maintenance, monopolies, and communications developments and the administration of loans received from official international financial organisations and foreign governments.

Revenues derive mainly from national taxes and non-tax revenues. Taxes in Korea can be roughly classified into the following types:

- income tax and capital gains tax,
- property tax,
- value-added tax,
- customs duty tax, and
- other taxes.

Income tax and capital gains tax are imposed on income derived from labour, business operation and ownership of assets and profits derived from capital appreciation. Income tax and capital gains tax, depending on the type of taxpayer, can be further classified into corporate income tax and individual income tax. Property tax is

imposed on exchange or ownership of property and includes inheritance tax and gift tax. Value-added tax is imposed on value added to goods and services. Customs duty tax is imposed on imported goods. Other taxes include tax on certain securities transactions and a stamp tax for certain documents.

Expenditures include general administration, national defence, community service, education, health, social security, certain annuities and pensions and local finance, which involves the transfer of tax revenues to local governments.

For 2017, the Republic recorded total revenues of ₩403.8 trillion and total expenditures and net lending of ₩379.8 trillion. The Republic had a fiscal surplus of ₩24.0 trillion in 2017.

For 2018, the Republic recorded total revenues of ₩438.3 trillion and total expenditures and net lending of ₩407.1 trillion. The Republic had a fiscal surplus of ₩31.2 trillion in 2018.

For 2019, the Republic recorded total revenues of ₩443.9 trillion and total expenditures and net lending of ₩455.9 trillion. The Republic had a fiscal deficit of ₩12.0 trillion in 2019.

For 2020, the Republic recorded total revenues of ₩446.6 trillion and total expenditures and net lending of ₩517.8 trillion. The Republic had a fiscal deficit of ₩71.2 trillion in 2020.

Based on preliminary data, the Republic recorded total revenues of ₩537.6 trillion and total expenditures and net lending of ₩568.0 trillion in 2021. The Republic had a fiscal deficit of ₩30.4 trillion in 2021.

The Government currently expects that the Republic's fiscal deficit will decrease in 2022, primarily due to an increase in tax revenues following a steady recovery of the economy as well as an increase in real estate-related taxes. However, such predictions are highly uncertain and will depend on, among others, the speed and extent of the economic recovery in Korea and internationally, which in turn will likely depend significantly on the scope and duration of the ongoing COVID-19 pandemic.

## **Debt**

The Government estimates that the total outstanding debt of the Government (including guarantees by the Government) as of 31 December 2020 amounted to approximately ₩831.7 trillion, an increase of 16.5% over the previous year.

The Government estimates that the total outstanding debt of the Government (including guarantees by the Government) as of 31 December 2021 amounted to approximately ₩950.0 trillion, an increase of 14.2% over the previous year.

The Government expects that the amount of the Government's debt will further increase in 2022 as it continues to support the Republic's economic recovery and prepare for the transition to a post-pandemic economy. The Ministry of Economy and Finance administers the national debt of the Republic.

### ***External and Internal Debt of the Government***

The following table sets out, by currency and the equivalent amount in U.S. dollars, the estimated outstanding direct external debt of the Government as of 31 December 2021:

### Direct External Debt of the Government

	Amount in Original Currency	Equivalent Amount in U.S. Dollars <sup>(1)</sup>
	<i>(millions)</i>	
US\$ .....	US\$7,025.0	US\$7,025.0
Euro (EUR) .....	EUR2,150.0	2,429.5
Total .....		<u>US\$9,454.5</u>

Note:

- (1) Amounts expressed in currencies other than US\$ are converted to US\$ at the arbitrage rate announced by the Seoul Money Brokerage Services, Ltd. in effect on 31 December 2021.

The following table summarises, as of 31 December of the years indicated, the outstanding direct internal debt of the Republic:

### Direct Internal Debt of the Government

	<i>(billions of Won)</i>
2017 .....	619,971.9
2018 .....	643,550.9
2019 .....	690,524.1
2020 .....	808,941.0
2021 .....	927,865.2

The following table sets out all guarantees by the Government of indebtedness of others:

### Guarantees by the Government

	31 December				
	2017	2018	2019	2020	2021
	<i>(billions of Won)</i>				
Domestic.....	21,130.5	17,016.3	14,760.0	12,490.0	10,930.0
External <sup>(1)</sup> .....	—	—	—	—	—
Total .....	<u>21,130.5</u>	<u>17,016.3</u>	<u>14,760.0</u>	<u>12,490.0</u>	<u>10,930.0</u>

Note:

- (1) Converted to Won at foreign exchange banks' telegraphed transfer selling rates to customers or the market average exchange rates in effect on 31 December of each year.

For further information on the outstanding indebtedness, including guarantees, of the Republic, see “—Tables and Supplementary Information”.

### ***External Liabilities***

The following tables set out certain information regarding the Republic’s external liabilities calculated under the criteria based on the sixth edition of the Balance of Payment Manual published by the International Monetary Fund in December 2010 and implemented by the Government in December 2013. Under the sixth edition of Balance of Payment Manual (BPM6), in particular, prepayments received in connection with the construction of ships are excluded from the external liabilities.

	<b>31 December</b>				
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021<sup>(1)</sup></b>
	<i>(billions of dollars)</i>				
Long-term Liabilities .....	296.1	315.6	335.3	385.6	462.2
General Government.....	78.0	83.5	91.2	119.4	142.8
Monetary Authorities.....	14.5	15.2	14.4	15.0	35.9
Banks.....	91.7	100.1	104.4	112.2	128.1
Other Sectors .....	111.8	116.8	125.2	139.0	155.14
Short-term Liabilities.....	116.0	125.6	135.5	159.3	166.2
General Government.....	2.0	1.0	1.6	2.1	1.6
Monetary Authorities.....	8.1	12.8	10.9	10.8	9.6
Banks.....	85.5	90.3	102.0	120.4	123.6
Other Sectors .....	20.4	21.5	20.1	26.0	31.5
Total External Liabilities .....	412.0	441.2	470.7	544.9	628.5

Note:

(1) Preliminary.

### ***Commitments to Assume Treasury Obligations***

The Government may, if deemed necessary for recovery from disasters and calamities, make commitments to assume treasury obligations to the extent resolved by the National Assembly each fiscal year. In such cases, such commitments shall be executed in accordance with the procedures for spending reserve funds within general accounts. As of 31 December 2021, such commitments assumed by the Government amounted to ₩45.7 trillion.

### ***Debt Record***

The Government has always paid when due the full amount of principal of, interest on, and amortisation of sinking fund requirements of, all of its indebtedness.

## Tables and Supplementary Information

### A. External Debt of the Government

#### (1) External Bonds of the Government

Series	Issue Date	Maturity Date	Interest Rate (%)	Currency	Original Principal Amount	Principal Amount Outstanding as of 31 December 2020
2005-001 .....	2 November 2005	3 November 2025	5.625	USD	400,000,000	400,000,000
2013-001 .....	11 September 2013	11 September 2023	3.875	USD	1,000,000,000	1,000,000,000
2014-001 .....	10 June 2014	10 June 2044	4.125	USD	1,000,000,000	1,000,000,000
2014-002 .....	10 June 2014	10 June 2024	2.125	EUR	750,000,000	750,000,000
2017-001 .....	19 January 2017	19 January 2027	2.750	USD	1,000,000,000	1,000,000,000
2018-001 .....	20 September 2018	20 September 2028	3.500	USD	500,000,000	500,000,000
2018-002 .....	20 September 2018	20 September 2048	3.875	USD	500,000,000	500,000,000
2019-001 .....	19 June 2019	19 June 2029	2.500	USD	1,000,000,000	1,000,000,000
2019-002 .....	19 June 2019	19 June 2024	2.000	USD	500,000,000	500,000,000
2020-001 .....	16 September 2020	16 September 2030	1.000	USD	625,000,000	625,000,000
2020-002 .....	16 September 2020	16 September 2025	0.000	EUR	700,000,000	700,000,000
2021-001 .....	15 October 2021	15 October 2026	0.000	EUR	700,000,000	700,000,000
2021-002 .....	15 October 2021	15 October 2031	1.750	USD	500,000,000	500,000,000
Total External Bonds in Original Currencies .....						USD7,025,000,000
						EUR2,150,000,000
Total External Bonds in Equivalent Amount of Won <sup>(1)</sup> .....						₩11,214,168,500,000

Note:

- (1) U.S. dollar amounts are converted to Won amounts at the rate of US\$1.00 to ₩1,185.5, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd. Euro amounts are converted to Won amounts at the rate of EUR 1.00 to ₩1,342.34, the market average exchange rate in effect on 31 December 2021, as announced by Seoul Money Brokerage Services, Ltd.

#### (2) External Borrowings of the Government

None.

### B. External Guaranteed Debt of the Government

None.

### C. Internal Debt of the Government

Title	Range of Interest Rates	Range of Years of Issue	Range of Years of Original Maturity	Principal Amounts Outstanding as of 31 December 2020
	(%)			(billions of Won)

#### 1. Bonds

Title	Range of Interest Rates	Range of Years of Issue	Range of Years of Original Maturity	Principal Amounts Outstanding as of 31 December 2020
				(billions of Won)
Interest-Bearing Treasury Bond for Treasury Bond Management Fund.....	0.750-5.750	2006-2021	2022-2070	843,660.1
Interest-Bearing Treasury Bond for National Housing I.....	1.00-3.00	2012-2021	2017-2026	82,132.8
Interest-Bearing Treasury Bond for National Housing II .....	0.0-3.0	1997-2017	2019-2029	19.8
Interest-Bearing Treasury Bond for National Housing III.....	0	2005	2015	0
Non-interest-Bearing Treasury Bond for Contribution to International Organisations <sup>(1)</sup> .....	0	1968-1985	—	9.4
Total Bonds .....				925,822.1
<b>2. Borrowings</b>				
Borrowings from The Bank of Korea .....	—	—	—	0
Borrowings from the Sports Promotion Fund.....	1.060-1.920	2020-2021	2022-2023	940.0
Borrowings from The Korea Foundation Fund.....	0.955-1.285	2020-2021	2022	78.1
Borrowings from the Labor Welfare Promotion Fund .....	—	—	—	0
Borrowings from Korea Technology Finance Corporation .....	0.81-2.34	2018-2020	2022	195.0
Borrowings from the Credit Guarantee Fund for Agriculture, Forestry and Fisheries Suppliers.....	—	—	—	0
Borrowings from the Government Employees' Pension Fund .....	—	—	—	0
Borrowings from the Film Industry Development Fund .....	—	—	—	0
Borrowings from the Korea Credit Guarantee Fund.....	0.81	2020	2023	250.0
Borrowings from the Housing Finance Credit Guarantee Fund.....	0.815-1.285	2020	2023	530.0
Borrowings from the Korea Infrastructure Credit Guarantee Fund.....	0.81	2020	2023	50.0
Total Borrowings.....				2,043.1
Total Internal Funded Debt.....				927,865.2

Note:

(1) Interest Rates and Years of Original Maturity not applicable.

#### ***D. Internal Guaranteed Debt of the Government***

Title	Range of Interest Rates	Range of Years of Issue	Range of Years of Original Maturity	Principal Amounts Outstanding as of 31 December 2020
	(%)			<i>(billions of Won)</i>
<b>1. Bonds of Government-Affiliated Corporations</b>				
Korea Deposit Insurance Corporation.....	—	—	—	0
Korea Student Aid Foundation .....	0.00-4.79	2011-2021	2022-2041	10,180.0
Key Industry Stabilization Fund .....	0.94-2.19	2020-2021	2022-2025	750.0
Total Internal Guaranteed Debt .....				<u>10,930.0</u>

#### ***E. Others***

##### *Commitments to Assume Treasury Obligations*

The Government may, if deemed necessary for recovery from disasters and calamities, make commitments to assume treasury obligations to the extent resolved by the National Assembly each fiscal year. In such cases, such commitments shall be executed in accordance with the procedures for spending reserve funds within general accounts. As of 31 December 2021, such commitments assumed by the Government amounted to ₩45.7 trillion.

## **TAXATION**

### **General**

The comments below are of a general nature and are not intended to be exhaustive. They assume that there will be no substitution of the Issuer and do not address the consequences of any such substitution (notwithstanding that such substitution may be permitted by the terms and conditions of the Notes). Any Noteholders who are in doubt as to their own tax position should consult their professional advisers. In particular, Noteholders should be aware that the tax legislation of any jurisdiction where a Noteholder is resident or otherwise subject to taxation (as well as the jurisdictions discussed below) may have an impact on the tax consequences of an investment in the Notes including in respect of any income received from the Notes.

### **Certain U.S. Federal Income Tax Considerations**

The following is a summary of certain U.S. federal income tax consequences of the acquisition, ownership and disposition of Notes by a holder. This summary does not address the material U.S. federal income tax consequences of every type of Note which may be issued under the Programme and the relevant Pricing Supplement may contain additional or modified disclosure concerning the material U.S. federal income tax consequences relevant to such type of Note as appropriate. This summary deals only with purchasers of Notes that will hold the Notes as capital assets. The discussion does not cover all aspects of U.S. federal income taxation that may be relevant to, or the actual tax effect that any of the matters described herein will have on, the acquisition, ownership or disposition of Notes by particular investors (including consequences under the alternative minimum tax or net investment income tax), and does not address state, local, non-U.S. or other tax laws (such as estate or gift tax laws). In particular, this summary does not discuss all of the tax considerations that may be relevant to certain types of investors subject to special treatment under the U.S. federal income tax laws (such as financial institutions, insurance companies, individual retirement accounts and other tax-deferred accounts, tax-exempt organisations, dealers in securities or currencies, investors that will hold the Notes as part of straddles, hedging transactions or conversion transactions for U.S. federal income tax purposes, persons that have ceased to be U.S. citizens or lawful permanent residents of the United States, investors holding the Notes in connection with a trade or business conducted outside of the United States, persons that have ceased to be U.S. citizens or lawful permanent residents of the United States, U.S. citizens or lawful permanent residents living abroad, persons required for U.S. federal income tax purposes to accelerate the recognition of any items of gross income with respect to the Notes as a result of such income being recognised on an applicable financial statement, or investors whose functional currency is not the U.S. dollar). Moreover, the summary deals only with Notes with a term of 30 years or less. The U.S. federal income tax consequences of owning Notes with a longer term will be discussed in the applicable Pricing Supplement.

As used herein, the term “U.S. Holder” means a beneficial owner of Notes that is, for U.S. federal income tax purposes, (i) an individual citizen or resident of the United States, (ii) a corporation created or organised under the laws of the United States or any state thereof or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income tax without regard to its source or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or the trust has validly elected to be treated as a domestic trust for U.S. federal income tax purposes. A “Non-U.S. Holder” means a beneficial owner of Notes that is neither a U.S. Holder nor a partnership.

The U.S. federal income tax treatment of a partner in an entity or arrangement treated as a partnership for U.S. federal income tax purposes that holds Notes will depend on the status of the partner and the activities of the partnership. Prospective purchasers that are entities or arrangements treated as partnerships for U.S. federal

income tax purposes should consult their tax adviser concerning the U.S. federal income tax consequences to them and their partners of the acquisition, ownership and disposition of Notes by the partnership.

This summary is based on the tax laws of the United States including the Internal Revenue Code of 1986, as amended (the “Code”), its legislative history, existing and proposed regulations thereunder, published rulings and court decisions, as well as on the income tax treaty between the United States and Korea (the “Treaty”) all as of the date hereof and all subject to change at any time, possibly with retroactive effect.

*Bearer Notes are not being offered to U.S. Holders. A U.S. Holder who owns a Bearer Note may be subject to limitations under United States income tax laws, including the limitations provided in sections 165(j) and 1287(a) of the Code.*

**THE SUMMARY OF U.S. FEDERAL INCOME TAX CONSEQUENCES SET OUT BELOW IS FOR GENERAL INFORMATION ONLY. ALL PROSPECTIVE PURCHASERS SHOULD CONSULT THEIR TAX ADVISERS AS TO THE PARTICULAR TAX CONSEQUENCES TO THEM OF OWNING THE NOTES, INCLUDING THEIR ELIGIBILITY FOR THE BENEFITS OF THE TREATY, THE APPLICABILITY AND EFFECT OF STATE, LOCAL, NON-U.S. AND OTHER TAX LAWS AND POSSIBLE CHANGES IN TAX LAW.**

## **U.S. Federal Income Tax Characterisation of the Notes**

The characterisation of a Series or Tranche of Notes may be uncertain and will depend on the terms of those Notes. The determination of whether an obligation represents debt, equity or some other instrument or interest is based on all the relevant facts and circumstances. Depending on the terms of a particular Series or Tranche of Notes, the Notes may not be characterised as debt for U.S. federal income tax purposes despite the form of the Notes as debt instruments. There may be no statutory, judicial or administrative authority directly addressing the characterisation of some of the types of Notes that are anticipated to be issued under the Programme or of instruments similar to the Notes. As a consequence, it may be unclear how a Series or Tranche of Notes should be properly characterised for U.S. federal income tax purposes. Further possible characterisations, if applicable, may be discussed in the relevant Pricing Supplement or any information memorandum or series information memorandum.

No rulings will be sought from the U.S. Internal Revenue Service (“IRS”) regarding the characterisation of any of the Notes issued hereunder for U.S. federal income tax purposes. Each holder should consult its own tax adviser about the proper characterisation of the Notes for U.S. federal income tax purposes, and the consequences to the holder of acquiring, owning or disposing of the Notes.

The following summary applies to Notes that are properly treated as debt for U.S. federal income tax purposes.

## **Taxation of U.S. Holders**

### **Payments of Interest**

#### ***General***

Interest on a Note, whether payable in U.S. dollars or a currency, composite currency or basket of currencies other than U.S. dollars (a “foreign currency”), other than interest on a “Discount Note” that is not “qualified stated interest” (each as defined below under “Original Issue Discount — General”), will be taxable to a U.S. Holder as ordinary income at the time it is received or accrued, depending on such holder’s method of accounting for U.S. federal income tax purposes, reduced by the allocable amount of amortisable bond premium, subject to the discussion below. Interest paid by the Issuer on the Notes and original issue discount

(“OID”), if any, accrued with respect to the Notes (as described below under “Original Issue Discount”) generally will constitute income from sources outside the United States.

### ***Effect of Korean Withholding Taxes***

As discussed in “— Korean Taxation”, under current law, payments of interest and OID on the Notes to foreign investors may be subject to Korean withholding taxes. For U.S. federal income tax purposes, U.S. Holders will be treated as having actually received the amount of Korean taxes withheld by the Issuer with respect to a Note, and as then having actually paid over the withheld taxes to the Korean tax authorities. As a result, the amount of interest income included in gross income for U.S. federal income tax purposes by a U.S. Holder with respect to a payment of interest or OID may be greater than the amount of cash actually received (or receivable) by the U.S. Holder from the Issuer with respect to the payment.

Subject to certain limitations, a U.S. Holder generally will be entitled to a credit against its U.S. federal income tax liability, or a deduction in computing its U.S. federal taxable income, for Korean income taxes withheld by the Issuer. Interest generally will constitute “passive category income” for purposes of the foreign tax credit. The rules governing foreign tax credits are complex. Prospective purchasers should consult their tax advisers concerning the foreign tax credit implications of Korean withholding taxes.

## **Original Issue Discount**

### ***General***

The following is a summary of the principal U.S. federal income tax consequences of the ownership of Notes issued with OID. The following summary does not discuss Notes that are characterised as contingent payment debt instruments for U.S. federal income tax purposes. In the event the Issuer issues contingent payment debt instruments the applicable Pricing Supplement may describe the material U.S. federal income tax consequences thereof.

A Note, other than a Note with a term of one year or less (a “Short-Term Note”), will be treated as issued with OID (a “Discount Note”) if the excess of the Note’s “stated redemption price at maturity” over its issue price is equal to or more than a *de minimis* amount (0.25 per cent. of the Note’s stated redemption price at maturity multiplied by the number of complete years to its maturity). An obligation that provides for the payment of amounts other than qualified stated interest before maturity (an “instalment obligation”) will be treated as a Discount Note if the excess of the Note’s stated redemption price at maturity over its issue price is equal to or greater than 0.25 per cent. of the Note’s stated redemption price at maturity multiplied by the weighted average maturity of the Note. A Note’s weighted average maturity is the sum of the following amounts determined for each payment on a Note (other than a payment of qualified stated interest): (i) the number of complete years from the issue date until the payment is made multiplied by (ii) a fraction, the numerator of which is the amount of the payment and the denominator of which is the Note’s stated redemption price at maturity. Generally, the issue price of a Note will be the first price at which a substantial amount of Notes included in the issue of which the Note is a part is sold to persons other than bond houses, brokers, or similar persons or organisations acting in the capacity of underwriters, placement agents, or wholesalers. The stated redemption price at maturity of a Note is the total of all payments provided by the Note that are not payments of “qualified stated interest.” A qualified stated interest payment generally is any one of a series of stated interest payments on a Note that are unconditionally payable at least annually at a single fixed rate (with certain exceptions for lower rates paid during some periods), or a variable rate (in the circumstances described below under “—Variable Interest Rate Notes”), applied to the outstanding principal amount of the Note. Solely for the purposes of determining whether a Note has OID, the Issuer will be deemed to exercise any call option that has the effect of decreasing the yield on the Note, and the U.S. Holder will be deemed to exercise any put option that has the effect of increasing the yield on the Note.

U.S. Holders of Discount Notes must include OID in income calculated on a constant-yield method before the receipt of cash attributable to the income, and generally will have to include in income increasingly greater amounts of OID over the life of the Discount Notes. The amount of OID includible in income by a U.S. Holder of a Discount Note is the sum of the daily portions of OID with respect to the Discount Note for each day during the taxable year or portion of the taxable year on which the U.S. Holder holds the Discount Note. The daily portion is determined by allocating to each day in any “accrual period” a pro rata portion of the OID allocable to that accrual period. Accrual periods with respect to a Note may be of any length selected by the U.S. Holder and may vary in length over the term of the Note as long as (i) no accrual period is longer than one year and (ii) each scheduled payment of interest or principal on the Note occurs on either the final or first day of an accrual period. The amount of OID allocable to an accrual period equals the excess of (a) the product of the Discount Note’s adjusted issue price at the beginning of the accrual period and the Discount Note’s yield to maturity (determined on the basis of compounding at the close of each accrual period and properly adjusted for the length of the accrual period) over (b) the sum of the payments of qualified stated interest on the Note allocable to the accrual period. The “adjusted issue price” of a Discount Note at the beginning of any accrual period is the issue price of the Note increased by (x) the amount of accrued OID for each prior accrual period and decreased by (y) the amount of any payments previously made on the Note that were not qualified stated interest payments.

### ***Acquisition Premium***

A U.S. Holder that purchases a Discount Note for an amount less than or equal to the sum of all amounts payable on the Note after the purchase date, other than payments of qualified stated interest, but in excess of its adjusted issue price (any such excess being “acquisition premium”) and that does not make the election described below under “Election to Treat All Interest as Original Issue Discount”, is permitted to reduce the daily portions of OID by a fraction, the numerator of which is the excess of the U.S. Holder’s adjusted basis in the Note immediately after its purchase over the Note’s adjusted issue price, and the denominator of which is the excess of the sum of all amounts payable on the Note after the purchase date, other than payments of qualified stated interest, over the Note’s adjusted issue price.

### ***Short-Term Notes***

In general, an individual or other cash basis U.S. Holder of a Short-Term Note is not required to accrue OID (as specially defined below for the purposes of this paragraph) for U.S. federal income tax purposes unless it elects to do so (but may be required to include any stated interest in income as the interest is received). Accrual basis U.S. Holders and certain other U.S. Holders are required to accrue OID on Short-Term Notes on a straight-line basis or, if the U.S. Holder so elects, under the constant-yield method (based on daily compounding). In the case of a U.S. Holder not required and not electing to include OID in income currently, any gain realised on the sale or retirement of the Short-Term Note will be ordinary income to the extent of the OID accrued on a straight-line basis (unless an election is made to accrue the OID under the constant-yield method) through the date of sale or retirement. U.S. Holders who are not required and do not elect to accrue OID on Short-Term Notes will be required to defer deductions for interest on borrowings allocable to Short-Term Notes in an amount not exceeding the deferred income until the deferred income is realised.

For purposes of determining the amount of OID subject to these rules, all interest payments on a Short-Term Note are included in the Short-Term Note’s stated redemption price at maturity. A U.S. Holder may elect to determine OID on a Short-Term Note as if the Short-Term Note had been originally issued to the U.S. Holder at the U.S. Holder’s purchase price for the Short-Term Note. This election will apply to all obligations with a maturity of one year or less acquired by the U.S. Holder on or after the first day of the first taxable year to which the election applies, and may not be revoked without the consent of the IRS.

### ***Fungible Issue***

The Issuer may, without the consent of the holders of outstanding Notes, issue additional Notes with identical terms. These additional Notes, even if they are treated for non-tax purposes as part of the same series as the original Notes, in some cases may be treated as a separate series for U.S. federal income tax purposes. In such a case, the additional Notes may be considered to have been issued with OID even if the original Notes had no OID, or the additional Notes may have a greater amount of OID than the original Notes. These differences may affect the market value of the original Notes if the additional Notes are not otherwise distinguishable from the original Notes.

### ***Market Discount***

A Note, other than a Short-Term Note, generally will be treated as purchased at a market discount (a “Market Discount Note”) if the Note’s stated redemption price at maturity or, in the case of a Discount Note, the Note’s “revised issue price”, exceeds the amount for which the U.S. Holder purchased the Note by at least 0.25 per cent. of the Note’s stated redemption price at maturity or revised issue price, respectively, multiplied by the number of complete years to the Note’s maturity (or, in the case of a Note that is an instalment obligation, the Note’s weighted average maturity). If this excess is not sufficient to cause the Note to be a Market Discount Note, then the excess constitutes “*de minimis* market discount”. For this purpose, the “revised issue price” of a Note generally equals its issue price, increased by the amount of any OID that has accrued on the Note and decreased by the amount of any payments previously made on the Note that were not qualified stated interest payments.

Any gain recognised on the sale or retirement of a Market Discount Note (including any payment on a Note that is not qualified stated interest) generally will be treated as ordinary income to the extent of the accrued market discount on the Note. Alternatively, a U.S. Holder of a Market Discount Note may avoid such treatment by electing to include market discount in income currently over the life of the Note. This election applies to all debt instruments with market discount acquired by the electing U.S. Holder on or after the first day of the first taxable year for which the election is made. This election may not be revoked without the consent of the IRS.

A U.S. Holder of a Market Discount Note that does not elect to include market discount in income currently may be required to defer deductions for interest on borrowings incurred to purchase or carry a Market Discount Note. Such interest is deductible when paid or incurred to the extent of income from the Note for the year. If the interest expense exceeds such income, such excess is currently deductible only to the extent that such excess exceeds the portion of the market discount allocable to the days during the taxable year on which such Note was held by the U.S. Holder.

Market discount will accrue on a straight-line basis unless the U.S. Holder elects to accrue the market discount on a constant-yield method. This election applies only to the Market Discount Note with respect to which it is made and is irrevocable.

### ***Variable Interest Rate Notes***

Notes that provide for interest at variable rates (“Variable Interest Rate Notes”) generally will bear interest at a “qualified floating rate” and thus will be treated as “variable rate debt instruments” under Treasury regulations governing accrual of OID. A Variable Interest Rate Note will qualify as a “variable rate debt instrument” if (a) its issue price does not exceed the total noncontingent principal payments due under the Variable Interest Rate Note by more than a specified *de minimis* amount, (b) it provides for stated interest, paid or compounded at least annually, at (i) one or more qualified floating rates, (ii) a single fixed rate and one or more qualified floating rates, (iii) a single objective rate, or (iv) a single fixed rate and a single objective rate that is a qualified inverse floating rate, and (c) it does not provide for any principal payments that are contingent (other than as described in (a) above).

A “qualified floating rate” is any variable rate where variations in the value of the rate can reasonably be expected to measure contemporaneous variations in the cost of newly borrowed funds in the currency in which the Variable Interest Rate Note is denominated. A fixed multiple of a qualified floating rate will constitute a qualified floating rate only if the multiple is greater than 0.65 but not more than 1.35. A variable rate equal to the product of a qualified floating rate and a fixed multiple that is greater than 0.65 but not more than 1.35, increased or decreased by a fixed rate, will also constitute a qualified floating rate. In addition, two or more qualified floating rates that can reasonably be expected to have approximately the same values throughout the term of the Variable Interest Rate Note (e.g., two or more qualified floating rates with values within 25 basis points of each other as determined on the Variable Interest Rate Note’s issue date) will be treated as a single qualified floating rate. Notwithstanding the foregoing, a variable rate that would otherwise constitute a qualified floating rate but which is subject to one or more restrictions such as a maximum numerical limitation (i.e., a cap) or a minimum numerical limitation (i.e., a floor) may, under certain circumstances, fail to be treated as a qualified floating rate.

An “objective rate” is a rate that is not itself a qualified floating rate but which is determined using a single fixed formula and which is based on objective financial or economic information (e.g., one or more qualified floating rates or the yield of actively traded personal property). A rate will not qualify as an objective rate if it is based on information that is within the control of the Issuer (or a related party) or that is unique to the circumstances of the Issuer (or a related party), such as dividends, profits or the value of the Issuer’s stock (although a rate does not fail to be an objective rate merely because it is based on the credit quality of the Issuer). Other variable interest rates may be treated as objective rates if so designated by the IRS in the future. Despite the foregoing, a variable rate of interest on a Variable Interest Rate Note will not constitute an objective rate if it is reasonably expected that the average value of the rate during the first half of the Variable Interest Rate Note’s term will be either significantly less than or significantly greater than the average value of the rate during the final half of the Variable Interest Rate Note’s term. A “qualified inverse floating rate” is any objective rate where the rate is equal to a fixed rate minus a qualified floating rate, as long as variations in the rate can reasonably be expected to inversely reflect contemporaneous variations in the qualified floating rate. If a Variable Interest Rate Note provides for stated interest at a fixed rate for an initial period of one year or less followed by a variable rate that is either a qualified floating rate or an objective rate for a subsequent period and if the variable rate on the Variable Interest Rate Note’s issue date is intended to approximate the fixed rate (e.g., the value of the variable rate on the issue date does not differ from the value of the fixed rate by more than 25 basis points), then the fixed rate and the variable rate together will constitute either a single qualified floating rate or objective rate, as the case may be.

A qualified floating rate or objective rate in effect at any time during the term of the instrument must be set at a “current value” of that rate. A “current value” of a rate is the value of the rate on any day that is no earlier than three months prior to the first day on which that value is in effect and no later than one year following that first day.

If a Variable Interest Rate Note that provides for stated interest at either a single qualified floating rate or a single objective rate throughout the term thereof qualifies as a “variable rate debt instrument”, then any stated interest on the Note which is unconditionally payable in cash or property (other than debt instruments of the Issuer) at least annually will constitute qualified stated interest and will be taxed accordingly. Thus, a Variable Interest Rate Note that provides for stated interest at either a single qualified floating rate or a single objective rate throughout the term thereof and that qualifies as a “variable rate debt instrument” generally will not be treated as having been issued with OID unless the Variable Interest Rate Note is issued at a “true” discount (i.e., at a price below the Note’s stated principal amount) equal to or in excess of a specified *de minimis* amount. OID on a Variable Interest Rate Note arising from “true” discount is allocated to an accrual period using the constant-yield method described above by assuming that the variable rate is a fixed rate equal to (i) in the case of a qualified floating rate or qualified inverse floating rate, the value, as of the issue date, of the qualified floating

rate or qualified inverse floating rate, or (ii) in the case of an objective rate (other than a qualified inverse floating rate), a fixed rate that reflects the yield that is reasonably expected for the Variable Interest Rate Note.

In general, any other Variable Interest Rate Note that qualifies as a “variable rate debt instrument” will be converted into an “equivalent” fixed rate debt instrument for purposes of determining the amount and accrual of OID and qualified stated interest on the Variable Interest Rate Note. Such a Variable Interest Rate Note must be converted into an “equivalent” fixed rate debt instrument by substituting any qualified floating rate or qualified inverse floating rate provided for under the terms of the Variable Interest Rate Note with a fixed rate equal to the value of the qualified floating rate or qualified inverse floating rate, as the case may be, as of the Variable Interest Rate Note’s issue date. Any objective rate (other than a qualified inverse floating rate) provided for under the terms of the Variable Interest Rate Note is converted into a fixed rate that reflects the yield that is reasonably expected for the Variable Interest Rate Note. In the case of a Variable Interest Rate Note that qualifies as a “variable rate debt instrument” and provides for stated interest at a fixed rate in addition to either one or more qualified floating rates or a qualified inverse floating rate, the fixed rate is initially converted into a qualified floating rate (or a qualified inverse floating rate, if the Variable Interest Rate Note provides for a qualified inverse floating rate). Under these circumstances, the qualified floating rate or qualified inverse floating rate that replaces the fixed rate must be such that the fair market value of the Variable Interest Rate Note as of the Variable Interest Rate Note’s issue date is approximately the same as the fair market value of an otherwise identical debt instrument that provides for either the qualified floating rate or qualified inverse floating rate rather than the fixed rate. Subsequent to converting the fixed rate into either a qualified floating rate or a qualified inverse floating rate, the Variable Interest Rate Note is converted into an “equivalent” fixed rate debt instrument in the manner described above.

Once the Variable Interest Rate Note is converted into an “equivalent” fixed rate debt instrument pursuant to the foregoing rules, the amount of OID and qualified stated interest, if any, are determined for the “equivalent” fixed rate debt instrument by applying the general OID rules to the “equivalent” fixed rate debt instrument and a U.S. Holder of the Variable Interest Rate Note will account for the OID and qualified stated interest as if the U.S. Holder held the “equivalent” fixed rate debt instrument. In each accrual period, appropriate adjustments will be made to the amount of qualified stated interest or OID assumed to have been accrued or paid with respect to the “equivalent” fixed rate debt instrument in the event that these amounts differ from the actual amount of interest accrued or paid on the Variable Interest Rate Note during the accrual period.

If a Variable Interest Rate Note, such as a Note the payments on which are determined by reference to an index, does not qualify as a “variable rate debt instrument”, then the Variable Interest Rate Note will be treated as a contingent payment debt obligation. The proper U.S. federal income tax treatment of Variable Interest Rate Notes that are treated as contingent payment debt obligations will be more fully described in the applicable Pricing Supplement.

### ***Notes Purchased at a Premium***

A U.S. Holder that purchases a Note for an amount in excess of its principal amount, or for a Discount Note, its stated redemption price at maturity, may elect to treat the excess as “amortisable bond premium”, in which case the amount required to be included in the U.S. Holder’s income each year with respect to interest on the Note will be reduced by the amount of amortisable bond premium allocable (based on the Note’s yield to maturity) to that year. Any election to amortise bond premium will apply to all bonds (other than bonds the interest on which is excludable from gross income for U.S. federal income tax purposes) held by the U.S. Holder at the beginning of the first taxable year to which the election applies or thereafter acquired by the U.S. Holder, and is irrevocable without the consent of the IRS. See also “Original Issue Discount — Election to Treat All Interest as Original Issue Discount”.

### ***Election to Treat All Interest as Original Issue Discount***

A U.S. Holder may elect to include in gross income all interest that accrues on a Note using the constant-yield method described above under “Original Issue Discount — General,” with certain modifications. For purposes of this election, interest includes stated interest, OID, *de minimis* OID, market discount, *de minimis* market discount and unstated interest, as adjusted by any amortisable bond premium (described above under “Notes Purchased at a Premium”) or acquisition premium. This election generally will apply only to the Note with respect to which it is made and may not be revoked without the consent of the IRS. If the election to apply the constant-yield method to all interest on a Note is made with respect to a Market Discount Note, the electing U.S. Holder will be treated as having made the election discussed above under “Market Discount” to include market discount in income currently over the life of all debt instruments having market discount that are acquired on or after the first day of the first taxable year to which the election applies. U.S. Holders should consult their tax advisers concerning the propriety and consequences of this election.

### **Purchase, Sale and Retirement of Notes**

A U.S. Holder generally will recognise gain or loss on the sale or retirement of a Note equal to the difference between the amount realised on the sale or retirement and the U.S. Holder’s adjusted tax basis of the Note. A U.S. Holder’s adjusted tax basis in a Note generally will be its cost, increased by the amount of any OID or market discount included in the U.S. Holder’s income with respect to the Note and the amount, if any, of income attributable to *de minimis* OID and *de minimis* market discount included in the U.S. Holder’s income with respect to the Note, and reduced by (i) the amount of any payments that are not qualified stated interest payments, and (ii) the amount of any amortisable bond premium applied to reduce interest on the Note. The amount realised does not include the amount attributable to accrued but unpaid interest, which will be taxable as interest income to the extent not previously included in income. Except to the extent described above under “Original Issue Discount — Market Discount” or “Original Issue Discount — Short-Term Notes” or attributable to changes in exchange rates (as discussed below), gain or loss recognised on the sale or retirement of a Note will be capital gain or loss and will be long-term capital gain or loss if the U.S. Holder’s holding period in the Notes exceeds one year.

Gain or loss realised by a U.S. Holder on the sale or retirement of a Note generally will be U.S. source. Therefore, a U.S. Holder may have insufficient foreign source income to utilise foreign tax credits attributable to any Korean withholding tax imposed on a sale or disposition. Prospective purchasers should consult their tax advisers as to the availability of and limitations on any foreign tax credit attributable to this Korean withholding tax.

### **Foreign Currency Notes**

#### ***Interest***

If an interest payment is denominated in, or determined by reference to, a foreign currency, the amount of income recognised by a cash basis U.S. Holder will be the U.S. dollar value of the interest payment, based on the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into U.S. dollars.

An accrual basis U.S. Holder may determine the amount of income recognised with respect to an interest payment denominated in, or determined by reference to, a foreign currency in accordance with either of two methods. Under the first method, the amount of income accrued will be based on the average exchange rate in effect during the interest accrual period (or, in the case of an accrual period that spans two taxable years of a U.S. Holder, the part of the period within the taxable year).

Under the second method, the U.S. Holder may elect to determine the amount of income accrued on the basis of the exchange rate in effect on the last day of the accrual period (or, in the case of an accrual period that spans

two taxable years, the exchange rate in effect on the last day of the part of the period within the taxable year). Additionally, if a payment of interest is actually received within five business days of the last day of the accrual period, an electing accrual basis U.S. Holder may instead translate the accrued interest into U.S. dollars at the exchange rate in effect on the day of actual receipt. Any such election will apply to all debt instruments held by the U.S. Holder at the beginning of the first taxable year to which the election applies or thereafter acquired by the U.S. Holder, and will be irrevocable without the consent of the IRS.

Upon receipt of an interest payment (including a payment attributable to accrued but unpaid interest upon the sale or retirement of a Note) denominated in, or determined by reference to, a foreign currency, the accrual basis U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) equal to the difference between the amount received (translated into U.S. dollars at the spot rate on the date of receipt) and the amount previously accrued, regardless of whether the payment is in fact converted into U.S. dollars.

### ***OID***

OID for each accrual period on a Discount Note that is denominated in, or determined by reference to, a foreign currency, will be determined in the foreign currency and then translated into U.S. dollars in the same manner as stated interest accrued by an accrual basis U.S. Holder, as described above. Upon receipt of an amount attributable to OID (whether in connection with a payment on the Note or a sale or disposition of the Note), a U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) equal to the difference between the amount received (translated into U.S. dollars at the spot rate on the date of receipt) and the amount previously accrued, regardless of whether the payment is in fact converted into U.S. dollars.

### ***Market Discount***

Market discount on a Note that is denominated in, or determined by reference to, a foreign currency, will be accrued in the foreign currency. If the U.S. Holder elects to include market discount in income currently, the accrued market discount will be translated into U.S. dollars at the average exchange rate for the accrual period (or portion thereof within the U.S. Holder's taxable year). Upon the receipt of an amount attributable to accrued market discount, the U.S. Holder may recognise U.S. source exchange gain or loss (which will be taxable as ordinary income or loss) determined in the same manner as for accrued interest or OID. A U.S. Holder that does not elect to include market discount in income currently will recognise, upon the sale or retirement of the Note, the U.S. dollar value of the amount accrued, calculated at the spot rate on that date, and no part of this accrued market discount will be treated as exchange gain or loss.

### ***Bond Premium***

Bond premium (including acquisition premium) on a Note that is denominated in, or determined by reference to, a foreign currency, will be computed in units of the foreign currency, and any such bond premium that is taken into account currently will reduce interest income (or OID) in units of the foreign currency. On the date bond premium offsets interest income (or OID), a U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) equal to the amount offset multiplied by the difference between the spot rate in effect on the date of the offset, and the spot rate in effect on the date the Notes were acquired by the U.S. Holder. A U.S. Holder that does not elect to take bond premium (other than acquisition premium) into account currently will recognise a market loss when the Note matures.

### ***Sale or Retirement***

As discussed above under “— Purchase, Sale and Retirement of Notes”, a U.S. Holder generally will recognise gain or loss on the sale or retirement of a Note equal to the difference between the amount realised on the sale or retirement and its tax basis in the Note, in each case as determined in U.S. dollars. U.S. Holders should consult their tax advisers about how to account for proceeds received on the sale or retirement of Notes that are not paid in U.S. dollars.

A U.S. Holder will recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) on the sale or retirement of a Note equal to the difference, if any, between the U.S. dollar values of the U.S. Holder's purchase price for the Note (as adjusted for amortised bond premium, if any) (i) on the date of sale or retirement and (ii) on the date on which the U.S. Holder acquired the Note. Any such exchange rate gain or loss will be realised only to the extent of total gain or loss realised on the sale or retirement (including any exchange gain or loss with respect to the receipt of accrued but unpaid interest).

### ***Disposition of Foreign Currency***

Foreign currency received as interest on a Note or on the sale or retirement of a Note will have a tax basis equal to its U.S. dollar value at the time the foreign currency is received. Foreign currency that is purchased generally will have a tax basis equal to the U.S. dollar value of the foreign currency on the date of purchase. Any gain or loss recognised on a sale or other disposition of a foreign currency (including its use to purchase Notes or upon exchange for U.S. dollars) will be U.S. source ordinary income or loss.

### **Occurrence of a Benchmark Event for Floating Rate Notes Linked to or Referencing a Benchmark Rate**

If a Benchmark Event (as defined in the Terms and Conditions of the Notes) occurs, a U.S. Holder holding Floating Rate Notes linked to or referencing a benchmark rate, including EURIBOR and any other IBOR, may be deemed to exchange such Floating Rate Notes for new notes under Section 1001 of the Code, which may be taxable to such U.S. Holder. Recently released proposed Treasury Regulations, which are not yet in effect but upon which taxpayers may rely, provide that in certain circumstances, the replacement of a benchmark rate with a qualifying reference rate would not result in a deemed exchange under Section 1001 of the Code. U.S. Holders should consult their tax advisers regarding the potential consequences of a Benchmark Event.

### **Reportable Transactions**

A U.S. taxpayer that participates in a "reportable transaction" will be required to disclose its participation to the IRS. Under the relevant rules, if the Notes are denominated in a foreign currency, a U.S. Holder may be required to treat a foreign currency exchange loss from the Notes as a reportable transaction if this loss exceeds the relevant threshold in the regulations (U.S.\$50,000 in a single taxable year, if the U.S. Holder is an individual or trust, or higher amounts for other non-individual U.S. Holders), and to disclose its investment by filing Form 8886 with the IRS. A penalty in the amount of U.S.\$10,000 in the case of a natural person and U.S.\$50,000 in all other cases generally is imposed on any taxpayer that fails to timely file an information return with the IRS with respect to a transaction resulting in a loss that is treated as a reportable transaction. Prospective purchasers are urged to consult their tax advisers regarding the application of these rules.

### **Taxation of Non-U.S. Holders**

#### ***U.S. Notes***

Payments of interest (including OID, if any) made to a Non-U.S. Holder on a Note issued by the Issuer's New York branch (a "U.S. Note") will be subject to U.S. withholding tax at a rate of 30 per cent. of the gross amount, unless eligible for one of the exceptions described below. Subject to the discussion of backup withholding and FATCA below, no withholding of U.S. federal income tax will be required with respect to payments of interest on a U.S. Note made to a Non-U.S. Holder, provided that:

- the Non-U.S. Holder does not actually or constructively own 10 per cent. or more of the total combined voting power of all of the class of the Issuer's stock that is entitled to vote;
- the Non-U.S. Holder is not a "controlled foreign corporation" that is related to the Issuer (actually or constructively);

- the income from the U.S. Notes held by the Non-U.S. Holder is not effectively connected with the conduct of a trade or business within the United States;
- the Non-U.S. Holder is not a bank whose receipt of interest on the U.S. Notes is described in Section 881(c)(3)(A) of the Code; and
- either (A) the beneficial owner of the U.S. Notes certifies to the Issuer or its agent on IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable (or successor form), under penalty of perjury, that it is not a U.S. person and provides its name and address and the certificate is renewed periodically as required by the Treasury Regulations, or (B) the U.S. Notes are held through certain intermediaries and the beneficial owner of the U.S. Notes satisfies certification requirements of applicable Treasury Regulations, and in either case, neither the Issuer nor its agent has actual knowledge or reason to know that the beneficial owner of the U.S. Note is a U.S. person. Special certification rules apply to certain Non-U.S. Holders that are entities rather than individuals.

If a Non-U.S. Holder cannot satisfy the requirements of the portfolio interest exemption described above (the “Portfolio Interest Exemption”), payments of interest on a U.S. Note made to such Non-U.S. Holder will be subject to a 30 per cent. withholding tax unless the beneficial owner of the U.S. Note provides the Issuer or its agent, as the case may be, with a properly executed:

- IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable (or successor form) claiming an exemption from withholding or reduced rate of tax under an applicable tax treaty (a “Treaty Exemption”); or
- IRS Form W-8ECI (or successor form) stating that interest paid on the U.S. Note is not subject to withholding tax because it is effectively connected with the conduct of a U.S. trade or business of the beneficial owner, each form to be renewed periodically as required by the Treasury Regulations.

If interest on a U.S. Note is effectively connected with the conduct of a U.S. trade or business of the beneficial owner, the Non-U.S. Holder, although exempt from the withholding tax described above (provided that the certification requirements discussed above are satisfied), generally will be subject to United States federal income tax on such interest on a net income basis in the same manner as if it were a U.S. person unless an applicable income tax treaty provides otherwise. In addition, if such Non-U.S. Holder is a corporation, it may be subject to a branch profits tax equal to 30 per cent. (or lower applicable treaty rate) of its effectively connected earnings and profits for the taxable year, subject to adjustments. For this purpose, interest on a U.S. Note will be included in such corporation’s earnings and profits.

Subject to the discussion of backup withholding and FATCA below, no withholding of United States federal income tax will be required with respect to any gain realised by a Non-U.S. Holder upon the sale, exchange or other disposition (including a retirement or redemption) of a U.S. Note.

In general, a Non-U.S. Holder will not be subject to United States federal income tax on gain realised on the sale, exchange or other disposition (including a retirement or redemption) of a U.S. Note unless (a) the Non-U.S. Holder is an individual who is present in the United States for a period or periods aggregating 183 or more days in the taxable year of the disposition and certain other conditions are met, in which case the Non-U.S. Holder will be subject to United States federal income tax on any gain recognised, which may be offset by certain United States source losses, at a flat rate of 30 per cent. (except as otherwise provided by an applicable income tax treaty), or (b) such gain is effectively connected with the Non-U.S. Holder’s U.S. trade or business, in which case the Non-U.S. Holder will be taxed in the same manner as discussed above with respect to effectively connected interest.

### ***Non-U.S. Notes***

The following three paragraphs describe certain U.S. federal income tax considerations for Non-United States Persons relating to Notes issued by the Issuer outside of its New York Branch. (“Non-U.S. Notes”). Subject to the discussion of backup withholding and FATCA below, no withholding of U.S. federal income tax will be required with respect to payments of interest made to a Non-U.S. Holder on a Non-U.S. Note.

If a Non-U.S. Holder is engaged in a United States trade or business and interest received on a Non-U.S. Note is effectively connected with the conduct of this trade or business, the Non-U.S. Holder will be subject to tax on the interest received on the Non-U.S. Note on a net income basis in the same manner as if the Non-U.S. Holder were a U.S. Holder. If the Non-U.S. Holder is a corporation, any effectively connected income may also be subject to a branch profits tax at a rate of 30 per cent. (or such lower rate as may be specified by an applicable income tax treaty).

A Non-U.S. Holder generally will not be subject to U.S. federal income tax on any gain realised upon a sale or other disposition of a Non-U.S. Note unless the gain is effectively connected with the conduct of a trade or business within the United States (and, under certain income tax treaties, if this gain is attributable to a U.S. permanent establishment maintained by the Non-U.S. Holder); or, if the Non-U.S. Holder is an individual and holds the Non-U.S. Note as a capital asset, unless he is present in the United States for 183 days or more in the taxable year of disposition, meets certain other conditions, and is not eligible for relief under an applicable income tax treaty.

Non-U.S. Holders should consult their own tax advisers regarding the U.S. federal income and other tax consequences of owning Notes.

### **Backup Withholding and Information Reporting**

In general, payments of principal, interest and accruals of OID on, and the proceeds of a sale, redemption or other disposition of, the Notes, payable to a U.S. Holder by a U.S. paying agent or other U.S. intermediary will be reported to the IRS and to the U.S. Holder as may be required under applicable regulations. Backup withholding will apply to these payments, including payments of accrued OID, if the U.S. Holder fails to provide an accurate taxpayer identification number or certification of exempt status or otherwise fails to comply with applicable certification requirements. Certain U.S. Holders are not subject to backup withholding. U.S. Holders should consult their tax advisers as to their qualification for exemption from backup withholding and the procedure for obtaining an exemption. U.S. Holders should consult their tax advisers regarding the application of these rules and any other reporting obligations that may apply to the ownership or disposition of the Notes, including requirements related to certain “specified foreign financial assets”.

Payments of principal, and interest and accrued OID on, and the proceeds of a sale, redemption or other disposition of Notes, by a U.S. paying agent or other U.S. intermediary to a holder of a Note that is not a U.S. Holder will not be subject to backup withholding tax and information reporting requirements if appropriate certification (Form W-8BEN or some other appropriate form) is provided by the holder to the payor and the payor does not have actual knowledge that the certificate is false.

### **FATCA Withholding**

Certain provisions of U.S. law, commonly known as FATCA, impose reporting requirements and a withholding tax of 30 per cent. on (i) certain U.S. source payments, (ii) payments of gross proceeds from the disposition of assets that produce U.S. source interest or dividends, and (iii) certain payments by foreign financial institutions (“foreign passthru payments”) made to persons that fail to meet certain certification, reporting, or related requirements. The Issuer is a foreign financial institution for these purposes. A number of jurisdictions

(including Korea) have entered into, or have agreed in substance to, intergovernmental agreements with the United States to implement FATCA (“IGAs”), which modify the way in which FATCA applies in their jurisdictions.

Even if withholding would be required pursuant to FATCA or an IGA with respect to payments on instruments such as the Notes, proposed regulations have been issued that provide for (i) the repeal of the withholding tax applicable to payments of gross proceeds from the sale or retirement of a U.S. Note and (ii) the extension of the date on which withholding applies to foreign passthru payments to the date that is two years after the date on which final regulations defining “foreign passthru payments” are published in the U.S. Federal Register. In the preamble to the proposed regulations, the U.S. Treasury Department indicated that taxpayers may rely on these proposed regulations until the issuance of final regulations. FATCA withholding in respect of foreign passthru payments is not required for “obligations” that are not treated as equity for U.S. federal income tax purposes unless such obligations are issued or materially modified after the date that is six months after the date on which the final regulations defining “foreign passthru payments” are filed with the U.S. Federal Register (the “grandfathering date”). However, if Non-U.S. Notes are issued on or before the grandfathering date, and additional Non-U.S. Notes (as described under “Terms and Conditions of the Notes — Further Issues”) that are not distinguishable from these Non-U.S. Notes are issued after the expiration of the grandfather period and are subject to withholding under FATCA, then withholding agents may treat all Non-U.S. Notes, including the grandfathered Non-U.S. Notes, as subject to withholding under FATCA.

Holders should consult their own tax advisers regarding how these rules may apply to their investment in the Notes. In the event any withholding would be required pursuant to FATCA or an IGA with respect to payments on the Notes, no person will be required to pay additional amounts as a result of the withholding.

## **Korean Taxation**

The information provided below does not purport to be a complete summary of Korean tax law and practice currently applicable. Prospective investors who are in any doubt as to their tax position should consult with their own professional advisors.

The taxation of non-resident individuals and non-resident corporations (“non-residents”) depends on whether they have a “permanent establishment” (as defined under Korean law and applicable tax treaty) in Korea to which the relevant Korean source income is attributable or with which such income is effectively connected. Non-residents without a permanent establishment in Korea are taxed in the manner described below. Non-residents with permanent establishment in Korea are taxed in accordance with different rules.

### **Tax on Interest**

In principle, interest paid to a non-resident by a Korean company is subject to withholding of Korean income and corporation tax unless exempted by relevant laws or tax treaties.

The Special Tax Treatment Control Law (the “STTCL”) exempts interest payment on notes denominated in a foreign currency (excluding payment to a Korean corporation, permanent establishments of non-Korean corporations in Korea, or resident individual) from Korean income and corporation tax, provided that the notes are issued outside of Korea. The local income tax referred to below is also therefore eliminated.

Accordingly, if not exempt under this STTCL, interest payment on the Notes will be subject to withholding of Korean income or corporation tax at the rate of 14.0 per cent. for a non-resident. In addition, local income tax will be imposed at the rate of 10.0 per cent. of the income or corporation tax (raising the rate of total tax to 15.4 per cent.).

Tax is withheld by the payer of the interest. In principle, Korean law entitles the withholding tax payer and the withholding tax obligator who have suffered the incorrect withholding of Korean tax to recover from the Government any part of the Korean tax withheld in case the withholding tax obligator pays Korean tax withheld by the 10th day of the month following the month in which the interest was paid and submits the payment statement to a relevant tax office by the end of February of the next year from the interest payment date.

The tax rates may be reduced by an applicable tax treaty, convention or agreement between Korea and the resident country of the recipient of the income. The relevant tax treaties are discussed below.

### **Tax on Capital Gains**

Korean tax laws currently exclude from Korean taxation gains made by a non-resident without a permanent establishment in Korea from the sale of the Notes to other non-residents (unless the sale is to the non-resident's permanent establishments in Korea). In addition, capital gains earned by non-residents with or without permanent establishments in Korea from the transfer of Notes taking place outside Korea are currently exempt from taxation by virtue of STTCL, provided that the issuance of the Notes is deemed to be a foreign issuance under the STTCL.

In the absence of an applicable tax treaty or any other special tax laws reducing or eliminating capital gains tax, the applicable rate of capital gains tax is the lower of 11.0 per cent. (including local income tax) of the gross realisation proceeds (the "Gross Realisation Proceeds") or (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Korean securities) 22.0 per cent. (including local income tax) of the capital gains earned. The capital gain is calculated as the Gross Realisation Proceeds less the acquisition cost and certain direct transaction costs. There is no provision under relevant Korean law for offsetting gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributing to sales of Korean securities. Unless the seller can claim the benefit of an exemption of tax under an applicable tax treaty or in the absence of the seller producing satisfactory evidence of its acquisition cost in relation to the Korean securities being sold, the purchaser or the securities company, as applicable, must withhold an amount equal to 11.0 per cent. (including local income tax) of the Gross Realisation Proceeds. Any withheld tax must be paid no later than the 10th day of the month following the month in which the payment for the purchase of the relevant Korean securities occurred. Failure to timely transmit the withheld tax to the Korean tax authorities technically subjects the purchaser or the securities company to penalties under Korean tax law.

### **Inheritance Tax and Gift Tax**

Korean inheritance tax is imposed upon (1) all assets (wherever located) of the deceased if at the time of death the deceased was domiciled in Korea or had resided in Korea continuously for at least 183 days immediately prior to his/her death and (2) all property located in Korea which passes on death (irrespective of the domicile or the residence of the deceased). Gift tax is imposed in similar circumstances to the above. The taxes are imposed if the value of the relevant property is above a certain limit and the tax rate varies from 10.0 per cent. to 50.0 per cent. according to the value of the relevant property and the identity of the persons involved. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under Korean inheritance and gift tax laws, notes issued by Korean corporations are deemed located in Korea irrespective of where they are physically located or by whom they are owned, and, consequently, the Korean inheritance and gift taxes will be imposed on transfers of the Notes by inheritance or gift.

### **Stamp Duty and Securities Transaction Tax**

No stamp, issue or registration duties will be payable in Korea by the holders of the Notes in connection with the issue of the Notes except for a nominal amount of stamp duty on certain documents executed in Korea. No securities transaction tax will be imposed upon the transfer of the Notes.

## **Tax Treaties**

At the date of this Information Memorandum, Korea has tax treaties with, inter alia, Algeria, Australia, Austria, Bangladesh, Belgium, Brazil, Bulgaria, Canada, China, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Ireland, Islamic Republic of Iran, Israel, Italy, Japan, Kingdom of Nepal, Kingdom of Saudi Arabia, Kuwait, Kazakhstan, Luxembourg, Malaysia, Malta, Mexico, Mongolia, Morocco, the Netherlands, New Zealand, Norway, Pakistan, Papua New Guinea, the Philippines, Poland, Portuguese Republic, Republic of Albania, Republic of Azerbaijan, Republic of Belarus, Republic of Chile, Republic of Croatia, Republic of Estonia, Republic of Fiji, Republic of Iceland, Republic of Latvia, Republic of Lithuania, Republic of South Africa, Republic of Venezuela, Romania, Russia, Singapore, the Slovak Republic, Spain, Sri Lanka, State of Qatar, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, the Union of Myanmar, United Arab Emirates, the United Kingdom, the United States of America, Uzbekistan, Lao People's Democratic Republic, Sultanate of Oman, Hashemite Kingdom of Jordan, Republic of Slovenia, Vietnam, Gabon, Brunei, Bahrain, Ecuador, Uruguay, Colombia, Kyrgyz, Panama, Peru, Hong Kong, Tajikistan, Serbia, Georgia, Turkmenistan, Republic of Kenya and Federal Democratic Republic of Ethiopia. Under these treaties, the rate of withholding tax generally is reduced to 5.0 per cent. to 15.0 per cent. and the tax on capital gains is often eliminated.

Each holder of the Notes should consult with its tax adviser as to whether it is entitled to the benefit of a tax treaty with Korea. It is the responsibility of the party claiming the benefits of a tax treaty in respect of interest or capital gains to submit to the payer or purchaser, as the case may be, proof sufficient to establish the party's eligibility for tax benefits. In the absence of sufficient proof, the payer or the purchaser, as the case may be, must withhold tax at the normal rates.

Furthermore, in order for a non-resident to claim the benefit of a tax rate reduction or tax exemption on certain Korean source income (such as interest or capital gains) under an applicable tax treaty, Korean tax law requires such non-resident (or its agents) to submit an application (for reduced withholding tax rate, "application for entitlement to reduced tax rate," and in the case of exemptions from withholding tax, "application for tax exemption," along with a certificate of tax residency of such non-resident issued by a competent authority of the non-resident's country of tax residence, subject to certain exceptions) as the beneficial owner of such Korean source income ("BO application"). Such application should be submitted to the withholding agent prior to the payment date of the relevant income. Subject to certain exceptions, where the relevant income is paid to an overseas investment vehicle (which is not the beneficial owner of such income) ("OIV"), a beneficial owner claiming the benefit of an applicable tax treaty with respect to such income must submit its BO application to such OIV, which must submit an OIV report and a schedule of beneficial owners (and the BO applications collected from each beneficial owner, in case of the application for tax exemption) to the withholding agent prior to the payment date of such income. As one of the exceptions, effective from 1 January 2022, an OIV is deemed to be a beneficial owner of the Korean source income if (i) under the applicable tax treaty, the OIV bears tax liabilities in the country in which it is established; and (ii) the Korean source income is eligible for the treaty benefits under the tax treaty. The benefits under a tax treaty between Korea and the country of such OIV's residence will apply with respect to the relevant income paid to such OIV, subject to certain application requirements as prescribed by the Corporate Income Tax Law or Individual Income Tax Law. In the case of a tax exemption application, the withholding agent is required to submit such applications (together with the applicable OIV report in the case of income paid to an OIV) to the relevant district tax office by the ninth day of the month following the date of the payment of such income. However, this requirement does not apply to tax exemptions under Korean tax law such as the STTCL.

## **United Kingdom Taxation**

The following applies only to persons who are the beneficial owners of Notes and is a summary of the Issuer's understanding of current United Kingdom law and published HM Revenue and Customs ("HMRC") practice, which may not be binding on HMRC, in each case as at the latest practicable date before the date of this Information Memorandum, relating only to United Kingdom withholding tax treatment of payments of principal and interest in respect of Notes. Some aspects do not apply to certain classes of person (such as dealers and persons connected with the Issuer) to whom special rules apply. It does not deal with any other United Kingdom taxation implications of acquiring, holding or disposing of Notes. The United Kingdom tax treatment of prospective Noteholders depends on their individual circumstances and may be subject to change in the future. Any Noteholders are in doubt as to their own tax position should consult their professional advisers. In particular, Noteholders should be aware that the tax legislation of any jurisdiction where a Noteholder is resident or otherwise subject to taxation (as well as the jurisdiction discussed below) may have an impact on the tax consequences of an investment in the Notes including in respect of any income received from the Notes.

References in this part to "interest" shall mean amounts that are treated as interest for the purposes of United Kingdom taxation.

### **Payment of Interest on the Notes Issued by the Issuer Acting Otherwise than Through its London Branch**

Payments of interest on the Notes by the Issuer that do not have a United Kingdom source may be made without withholding or deduction for or on account of United Kingdom income tax.

### **Payment of Interest on the Notes Issued by the Issuer Acting Through its London Branch**

Payments of interest on the Notes by the Issuer that have a United Kingdom source may be made without deduction or withholding for or on account of United Kingdom income tax, provided the Issuer is and continues to be a bank within the meaning of section 991 of the Income Tax Act 2007 (the "Act") and the interest on the Notes is paid in the ordinary course of its business within the meaning of section 878 of the Act.

Payments of interest on the Notes by the Issuer that have a United Kingdom source may also be made without deduction of or withholding on account of United Kingdom income tax provided that the Issuer is a company for United Kingdom tax purposes and the Notes are and continue to be listed on a "recognised stock exchange" within the meaning of section 1005 of the Act. The SGX-ST is a recognised stock exchange for these purposes. The Notes will satisfy this requirement if they are officially listed in Singapore in accordance with provisions corresponding to those generally applicable in European Economic Area states and are admitted to trading on the Main Board of the SGX-ST. Provided, therefore, that the Notes are and remain so listed, interest on the Notes will be payable without withholding or deduction on account of United Kingdom income tax whether or not the Issuer is or continues to be a bank within the meaning of section 991 of the Act and whether or not the interest is paid in the ordinary course of its business.

Interest payable on the Notes that has a United Kingdom source may also be paid without withholding or deduction on account of United Kingdom income tax where interest on the Notes is paid by a company and, at the time the payment is made, the company reasonably believes that the beneficial owner is within the charge to United Kingdom corporation tax as regards the payment of interest; provided that HMRC has not given a direction (in circumstances where it has reasonable grounds to believe that the above exemption is not available in respect of such payment of interest at the time the payment is made) that the interest should be paid under deduction of tax.

Interest payable on the Notes that has a United Kingdom source may also be paid without withholding or deduction on account of United Kingdom income tax where the Notes have a maturity of less than 365 days

and are not issued with the intention, or under a scheme or arrangement the effect of which is, that such Notes form part of a borrowing with a total term of more than 364 days.

In all other cases, an amount must generally be withheld from payments of interest on the Notes that have a United Kingdom source on account of United Kingdom income tax at the basic rate (currently 20.00 per cent.), subject to the availability of other reliefs under United Kingdom domestic law. Where an applicable double tax treaty provides for a lower rate of withholding tax (or for no tax to be withheld) in relation to a Noteholder, HMRC can issue a notice to the Issuer to pay interest to the Noteholder without deduction of tax (or for interest to be paid with tax deducted at the rate provided for in the relevant double tax treaty).

## **PRC Taxation**

The holders of Notes denominated in RMB (the “RMB Notes”), who are not resident in the PRC for PRC tax purposes, will not be subject to withholding tax, income tax or any other taxes or duties imposed by any governmental authority in the PRC in respect of the RMB Notes or any repayment of principal and payment of interest made thereon.

## **Singapore Taxation**

The statements below are general in nature and are based on certain aspects of current tax laws in Singapore and administrative guidelines and circulars issued by the Inland Revenue Authority (“IRAS”) of Singapore and the Monetary Authority of Singapore (“MAS”) in force as at the date of this Information Memorandum, and are subject to any changes in such laws, administrative guidelines or circulars, or the interpretation of those laws, guidelines or circulars, occurring after such date, which could be made on a retroactive basis. These laws, guidelines and circulars are also subject to various interpretations and the relevant tax authorities or the courts could later disagree with the explanations or conclusions set out below. Neither these statements nor any other statements in this Information Memorandum are intended or are to be regarded as advice on the tax position of any holder of the Notes or of any person acquiring, selling or otherwise dealing with the Notes or on any tax implications arising from the acquisition, sale or other dealings in respect of the Notes. The statements below do not purport to be a comprehensive or exhaustive description of all the tax considerations that may be relevant to a decision to subscribe for, purchase, own or dispose of the Notes and do not purport to deal with the tax consequences applicable to all categories of investors, some of which (such as dealers in securities or financial institutions in Singapore which have been granted the relevant Financial Sector Incentive(s)) may be subject to special rules or tax rates. Prospective holders of the Notes are advised to consult their own professional tax advisers as to the Singapore or other tax consequences of the acquisition, ownership or disposal of the Notes, including, in particular, the effect of any foreign, state or local tax laws to which they are subject. It is emphasised that none of the Issuer, the Arranger, the Dealers or any other persons involved in the issuance of the Notes accepts responsibility for any tax effects or liabilities resulting from the subscription for, purchase, holding or disposal of the Notes.

## **Interest and Other Payments**

Subject to the following paragraphs, under Section 12(6) of the Income Tax Act, Chapter 134 of Singapore (the “Income Tax Act”), the following payments are deemed to be derived from Singapore:

- (a) any interest, commission, fee or any other payment in connection with any loan or indebtedness or with any arrangement, management, guarantee, or service relating to any loan or indebtedness which is (i) borne, directly or indirectly, by a person resident in Singapore or a permanent establishment in Singapore (except in respect of any business carried on outside Singapore through a permanent establishment outside Singapore or any immoveable property situated outside Singapore) or (ii) deductible against any income accruing in or derived from Singapore; or

- (b) any income derived from loans where the funds provided by such loans are brought into or used in Singapore.

Such payments, where made to a person not known to the paying party to be a resident in Singapore for tax purposes, are generally subject to withholding tax in Singapore. The rate at which tax is to be withheld for such payments (other than those subject to the 15 per cent. final withholding tax described below) to non-resident persons (other than non-resident individuals) is currently 17 per cent. The applicable rate for non-resident individuals is currently 22 per cent. However, if the payment is derived by a person not resident in Singapore from sources other than from its trade, business, profession or vocation carried on or exercised by such person in Singapore and is not effectively connected with any permanent establishment in Singapore of that person, the payment is subject to a final withholding tax of 15 per cent. The rate of 15 per cent. may be reduced by applicable tax treaties.

However, certain Singapore-sourced investment income derived by individuals from financial instruments is exempt from tax, including:

- (a) interest from debt securities derived on or after 1 January 2004;
- (b) discount income (not including discount income arising from secondary trading) from debt securities derived on or after 17 February 2006; and
- (c) prepayment fee, redemption premium and break cost from debt securities derived on or after 15 February 2007,

except where such income is derived through a partnership in Singapore or is derived from the carrying on of a trade, business or profession in Singapore.

### **Capital Gains**

Any gains considered to be in the nature of capital made from the sale of the Notes will not be taxable in Singapore. However, any gains derived by any person from the sale of the Notes which are gains from any trade, business, profession or vocation carried on by that person, if accruing in or derived from Singapore, may be taxable as such gains are considered revenue in nature.

Holders of the Notes who apply or are required to apply Singapore Financial Reporting Standards 39 (“FRS 39”) or 109 (“FRS 109”) may for Singapore income tax purposes be required to recognise gains or losses (not being gains or losses in the nature of capital) on the Notes, irrespective of disposal, in accordance with FRS 39 or FRS 109 (as modified by the applicable provisions of Singapore income tax law). Please see the section below on “Adoption of FRS 39 and FRS 109 Treatment for Singapore Income Tax Purposes”.

### **Adoption of FRS 39 and FRS 109 Treatment for Singapore Income Tax Purposes**

Section 34A of the Income Tax Act provides for the tax treatment for financial instruments in accordance with FRS 39 (subject to certain exceptions and “opt-out” provisions) to taxpayers who are required to comply with FRS 39 for financial reporting purposes. The IRAS has also issued a circular entitled “Income Tax Implications Arising from the Adoption of FRS 39 – Financial Instruments: Recognition and Measurement”.

FRS 109 is mandatorily effective for annual periods beginning on or after 1 January 2018, replacing FRS 39. Section 34AA of the Income Tax Act requires taxpayers who comply or who are required to comply with FRS 109 for financial reporting purposes to calculate their profit, loss or expense for Singapore income tax purposes in respect of financial instruments in accordance with FRS 109, subject to certain exceptions. The IRAS has

also issued a circular entitled “Income Tax: Income Tax Treatment Arising from Adoption of FRS 109 – Financial Instruments”.

Holders of the Notes who may be subject to the tax treatment under the Sections 34A or 34AA of the Income Tax Act should consult their own tax advisers regarding the Singapore income tax consequences of their acquisition, holding or disposal of the Notes.

### **Estate Duty**

Singapore estate duty has been abolished with respect to all deaths occurring on or after 15 February 2008.

### **Japanese Taxation**

*The following is a general description of certain Japanese tax aspects of the Notes and does not purport to be a comprehensive description of the tax aspects of the Notes. Prospective purchasers should note that, although the general tax information on Japanese taxation is described hereunder for convenience, the statements below are general in nature and not exhaustive. Prospective purchasers are advised to consult their own legal, tax, accountancy or other professional advisers in order to ascertain their particular circumstances regarding taxation.*

*Prospective purchasers should note that the Japanese tax treatment with respect to certain types of Notes, including but not limited to Index Linked Interest Notes, is not clear. Accordingly the actual Japanese tax treatment of certain types of Notes may be different from the treatment described below. Further, the statements below are based on current tax laws and regulations in Japan and current tax treaties executed by Japan all as in effect on the date hereof and all of which are subject to change or differing interpretations (possibly with retroactive effect). Neither such statements nor any other statements in this Information Memorandum are to be regarded as advice on the tax position of any beneficial owner of the Notes or any person purchasing, selling or otherwise dealing in the Notes or any tax implication arising from the purchase, sale or other dealings in respect of the Notes.*

### **Capital Gains, Inheritance and Gift Taxes, Stamp Tax and Other Similar Taxes**

Gains derived from the sale outside Japan of Notes (whether issued by the Issuer or other branch of the Issuer) by a non-resident of Japan or a non-Japanese corporation, or from sale within Japan of Notes by a non-resident of Japan or a non-Japanese corporation not having a permanent establishment in Japan are in general not subject to Japanese income or corporate taxes.

Japanese inheritance tax or gift tax at progressive rates may be payable by an individual, wherever resident, who has acquired Notes issued by the Issuer as legatee, heir or done from an individual.

No stamp, issue, registration or similar taxes or duties will, under present Japanese law, be payable in Japan by holders in connection with the issue of the Notes.

### **Interest with respect to Notes issued by the issuer other than the Issuer**

Under Japanese tax laws currently in effect the payment of interest in respect of Notes issued by the issuer other than the Issuer to a non-resident of Japan or to a non-Japanese corporation in accordance with the terms and conditions of Notes will not be subject to any Japanese income or corporation taxes payable by withholding. Furthermore, such payment will not be subject to any other Japanese income or corporation taxes otherwise than by way of withholding unless such non-resident or non-Japanese corporation has a permanent

establishment in Japan and payment of the interest is attributable to the business of the non-resident or non-Japanese corporation carried on in Japan through such permanent establishment.

### **Interest and Redemption Gain with respect to Notes issued by the Issuer**

The following description of Japanese taxation (limited to national taxes) applies exclusively to interest and the redemption gain, which is the difference between the acquisition price of such interest-bearing Notes of the

holder and the amount which the holder receives upon redemption of such interest-bearing Notes (the “redemption gain”), where such Notes are issued by the Issuer outside Japan and payable outside Japan (“Tokyo Branch Notes”). It is not intended to be exhaustive and holders of Tokyo Branch Notes and prospective investors are recommended to consult their tax advisers as to their exact tax position.

Interest payments on Tokyo Branch Notes paid to an individual resident of Japan, to a Japanese corporation (except for (i) a Japanese designated financial institution described in Article 6, paragraph 9 of the Special Taxation Measures Law of Japan (the “Special Taxation Measures Law”) which has complied with the requirements under that paragraph and (ii) a public corporation, a financial institution or a financial instruments business operator, etc., as provided in Article 3-3, paragraph 6 of the Special Taxation Measures Law which receives the interest payments through its payment handling agent in Japan and complies with the requirement for tax exemption under that paragraph), or to an individual non-resident of Japan or a non-Japanese corporation that in either case is a specially-related person of the Issuer will be subject to deduction in respect of Japanese income tax at a rate of 15 per cent. of the amount of such interest.

If the recipient of interest on Tokyo Branch Notes is a non-Japanese individual resident or a non-Japanese corporation with no permanent establishment within Japan, or a non-Japanese individual resident or a non-Japanese corporation with a permanent establishment within Japan but where the receipt of the interest under Tokyo Branch Notes is not attributable to the business carried on within Japan by the recipient through such permanent establishment, no Japanese income tax or corporate tax is payable with respect to such interest whether by way of withholding or otherwise, if such recipient complies with certain requirements, inter alia:

- (i) if the relevant Tokyo Branch Notes are held through a certain participant in an international clearing organisation such as DTC, Euroclear and Clearstream, Luxembourg or a certain financial intermediary prescribed by the Special Taxation Measures Law and the relevant cabinet order there-under (together with the relevant ministerial ordinance and other regulation thereunder, the “Law”) (each, a “Participant”), the requirement to provide certain information prescribed by the Law to enable the Participant to establish that the recipient is exempt from the requirement for Japanese tax to be withheld or deducted (the “Interest Recipient Information”); and
- (ii) if the relevant Tokyo Branch Notes are not held by a Participant, the requirement to submit to the relevant paying agent a written application for tax exemption from withholding tax (Hikazei Tekiyo Shinkokusho) (a “Written Application for Tax Exemption”), together with certain documentary evidence.

However, such payment of interest will be subject to Japanese withholding tax, if:

- (a) the amount of interest on Tokyo Branch Notes is calculated or determined on the basis of or by reference to certain indications including the amount of profit, revenue, assets and distribution of surplus, distribution of profit and other similar distributions of the Issuer or of any of its specially-related persons, as provided in Article 3-2-2, Paragraph 8 of the cabinet order (such Tokyo Branch Notes being referred to as the “Taxable Linked Notes”); or
- (b) the recipient of interest on Tokyo Branch Notes is an individual non-resident of Japan or a non-Japanese corporation who or which is a specially-related person of the Issuer.

Failure to comply with such requirements described above will result in the withholding by the Issuer of income tax at the rate of 15 per cent. unless any lower rate is applicable under the relevant tax treaty between Japan and another country.

If the recipient of interest on Tokyo Branch Notes is a non-Japanese individual resident or a non-Japanese corporation with a permanent establishment within Japan and the receipt of interest under Tokyo Branch Notes is attributable to the business of such non-Japanese individual resident or non-Japanese corporation carried on

within Japan through such permanent establishment, such interest will not be subject to 15 per cent. withholding tax by the Issuer; provided, however, that (i) Tokyo Branch Notes should not be Taxable Linked Notes, (ii) the recipient should not be a specially related person of the Issuer, and (iii) the recipient should provide the Interest Recipient Information or to submit the Written Application for Tax Exemption as set out above. Otherwise, it may result in the withholding by the Issuer of income tax at the rate of 15 per cent. The amount of such interest will be aggregated with the recipient's other Japanese source income which is subject to Japanese taxation and will be subject to normal income tax or corporate tax, as appropriate.

If any recipient of interest on Tokyo Branch Notes who is an individual resident of Japan, or a Japanese corporation (other than Japanese banks, Japanese insurance companies, Japanese securities companies or other Japanese financial institutions falling under certain categories prescribed by the relevant cabinet order under Article 3-3, paragraph 6 of the Special Taxation Measures Law (each, a "specified financial institution") or a Japanese public corporations designated by the relevant law which comply with the requirement as referred to below), receives payments of interest through certain payment handling agents in Japan (each a "Japanese payment handling agent"), income tax at the rate of 15 per cent. will be withheld by the Japanese payment handling agent rather than the Issuer. As the Issuer is not in a position to know in advance the recipients' status, the recipient of interest falling within this category should inform the Issuer through a paying agent of its status in a timely manner. Failure to so inform may result in double withholding. Individual holders of Tokyo Branch Notes being residents of Japan who receive interest under Tokyo Branch Notes through a Japanese payment handling agent will be taxed in Japan on such interest after netting particular loss and/or gain separately from his/her other income by filing a tax return; provided, however, that such individual holders may choose not to file such tax return, in which case the aforementioned withholding would be the final Japanese tax for such individual holders. In the case of other recipients who are Japanese corporations falling under the category referred to in the beginning of this paragraph, the amount of interest received by any such recipient will be included in such recipient's gross income and subject to normal corporate tax.

If the recipient of interest on Tokyo Branch Notes is a Japanese bank, a Japanese insurance company, a Japanese securities company, or any other Japanese financial institution falling under certain categories prescribed by the relevant cabinet order under Article 6, paragraph 9 of the Special Taxation Measures Law, (each, a "designated financial institution") and such recipient complies with the requirement, inter alia, to provide the Interest Recipient Information or to submit the Written Application for Tax Exemption, as the case may be, no income tax will be imposed, either by way of withholding or otherwise, but the recipient will be subject to normal corporate tax with respect to such interest.

If the recipient of interest on Tokyo Branch Notes is a Japanese public corporation, or a specified financial institution, that keeps its Tokyo Branch Notes deposited with, and receives the interest through, a Japanese payment handling agent with custody of Tokyo Branch Notes (the "Japanese custodian") and such recipient submits through such Japanese custodian to the competent tax authority the report prescribed by the Law, no income tax will be levied, by way of withholding or otherwise, on the full amount of interest, but if the recipient is a specified financial institution, the recipient will be subject to normal corporation tax with respect to such interest. However, since the Issuer is not in a position to know in advance the recipient's withholding tax exemption status, the recipient of interest falling within this category should inform the Issuer through a paying agent of its status in a timely manner. Failure to so notify the Issuer may result in the withholding by the Issuer of 15 per cent. income tax.

If the recipient of interest who is an individual resident of Japan or a Japanese corporation (except for a designated financial institution which complies with the requirements described in paragraph above) receives interest not through a Japanese payment handling agent, income tax at the rate of 15 per cent. will be withheld by the Issuer.

If the recipient of the redemption gain with respect to Tokyo Branch Notes is an individual who is a resident of Japan or a Japanese corporation, such redemption gain will not be subject to any withholding tax. If the recipient of the redemption gain with respect to Tokyo Branch Notes is an individual who is a resident of Japan, such redemption gain after netting particular loss and/or gain will be subject to 15 per cent. income tax separately from his/her other income by filing a tax return. On the other hand, if the recipient of the redemption gain with respect to Tokyo Branch Notes is a Japanese corporation, such redemption gain will be included in the recipient's gross income and subject to normal corporate tax.

If the recipient of the redemption gain with respect to interest-bearing Tokyo Branch Notes is not a specially-related person of the Issuer and a non-Japanese individual resident or a non-Japanese corporation having no permanent establishment within Japan, or a non-Japanese individual resident or a non-Japanese corporation having a permanent establishment within Japan but the receipt of such redemption gain is not attributable to the business carried on within Japan by such non-Japanese individual resident or non-Japanese corporation through such permanent establishment, no income tax or corporate tax is payable with respect to such redemption gain. If the receipt of such redemption gain with respect to interest-bearing Tokyo Branch Notes is attributable to the business of any such non-Japanese individual resident or non-Japanese corporation carried on within Japan through a permanent establishment maintained by it within Japan, such redemption gain will not be subject to any withholding tax but will be aggregated with the recipient's other Japanese source income which is subject to Japanese taxation and subject to normal income tax or corporate tax, as appropriate.

### **Special Additional Withholding Tax for Reconstruction from the Great East Japan Earthquake**

Where there is a reference to a withholding tax rate of 15 per cent. in the foregoing descriptions, for withholding tax due and payable until 31 December 2037, the applicable rate of withholding tax will be 15.315 per cent., due to the imposition of special additional withholding tax of 0.315 per cent. (or 2.1 per cent. of 15 per cent.) to secure funds for reconstruction from the Great East Japan Earthquake. There will also be a special additional tax imposed upon normal income tax and corporate tax, as referred to in the foregoing descriptions, for a certain period.

## **Hong Kong Taxation**

### ***Withholding Tax***

No withholding tax is payable in Hong Kong in respect of payments of principal or interest on the Notes or in respect of any capital gains arising from the sale of the Notes.

### ***Profits Tax***

Hong Kong profits tax is chargeable on every person carrying on a trade, profession or business in Hong Kong in respect of profits arising in or derived from Hong Kong from such trade, profession or business (excluding profits arising from the sale of capital assets).

Interest on the Notes may be deemed to be profits arising in or derived from Hong Kong from a trade, profession or business carried on in Hong Kong in the following circumstances:

- (i) interest on the Notes is derived from Hong Kong and is received by or accrues to a corporation carrying on a trade, profession or business in Hong Kong;
- (ii) interest on the Notes is derived from Hong Kong and is received by or accrues to a person, other than a corporation, carrying on a trade, profession or business in Hong Kong and is in respect of the funds of that trade, profession or business;

- (iii) interest on the Notes is received by or accrues to a financial institution (as defined in the Inland Revenue Ordinance (Cap. 112) of Hong Kong (the “**IRO**”)) and arises through or from the carrying on by the financial institution of its business in Hong Kong; or
- (iv) interest on the Notes is received by or accrues to a corporation, other than a financial institution, and arises through or from the carrying on in Hong Kong by the corporation of its intra-group financing business (within the meaning of section 16(3) of the IRO).

Pursuant to the Exemption from Profits Tax (Interest Income) Order, interest income accruing to a person other than a financial institution, on deposits (denominated in any currency and whether or not the deposit is evidenced by a certificate of deposit) placed with, *inter alia*, an authorised institution in Hong Kong (within the meaning of section 2 of the Banking Ordinance (Cap. 155) of Hong Kong) is exempt from the payment of Hong Kong profits tax. This exemption does not apply, however, to deposits that are used to secure or guarantee money borrowed in certain circumstances. Provided no prospectus involving the issue of the Notes is registered under the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong, the issue of the Notes by the Issuer is expected to constitute a deposit to which the above exemption from payment will apply.

Sums received by or accrued to a financial institution by way of gains or profits arising through or from the carrying on by the financial institution of its business in Hong Kong from the sale, disposal and redemption of Notes will be subject to Hong Kong profits tax. Sums received by or accrued to a corporation, other than a financial institution, by way of gains or profits arising through or from the carrying on in Hong Kong by the corporation of its intra-group financing business (within the meaning of section 16(3) of the IRO) from the sale, disposal or other redemption of Notes will be subject to Hong Kong profits tax.

Sums derived from the sale, disposal or redemption of Notes will be subject to Hong Kong profits tax where received by or accrued to a person, other than a financial institution, who carries on a trade, profession or business in Hong Kong and the sum has a Hong Kong source unless otherwise exempted. The source of such sums will generally be determined by having regard to the manner in which the Notes are acquired and disposed of.

In certain circumstances, Hong Kong profits tax exemptions (such as concessionary tax rates) may be available. Investors are advised to consult their own tax advisors to ascertain the applicability of any exemptions to their individual position.

### ***Stamp Duty***

Stamp duty will not be payable on the issue of Bearer Notes provided that either:

- (i) such Bearer Notes are denominated in a currency other than the currency of Hong Kong and are not repayable in any circumstances in the currency of Hong Kong; or
- (ii) such Bearer Notes constitute loan capital (as defined in the Stamp Duty Ordinance (Cap. 117) of Hong Kong (the “**SDO**”)).

If stamp duty is payable, it is payable by the Issuer on the issue of Bearer Notes at a rate of 3 per cent. of the market value of the Bearer Notes at the time of issue. No stamp duty will be payable on any subsequent transfer of Bearer Notes.

No stamp duty is payable on the issue of Registered Notes. Stamp duty may be payable on any transfer of Registered Notes if the relevant transfer is required to be registered in Hong Kong. Stamp duty will, however, not be payable on any transfer of Registered Notes provided that either:

- (i) such Registered Notes are denominated in a currency other than the currency of Hong Kong and are not repayable in any circumstances in the currency of Hong Kong; or
- (ii) such Registered Notes constitute loan capital (as defined in the SDO).

Notwithstanding the above, no stamp duty is payable on the transfer of a regulatory capital security (as defined in Section 17A of the IRO).

With effect from 1 August 2021, if stamp duty is payable in respect of the transfer of Registered Notes it will be payable at the rate of 0.26 per cent. (of which 0.13 per cent. is payable by the seller and 0.13 per cent. is payable by the purchaser) normally by reference to the consideration or its value, whichever is higher. In addition, stamp duty is payable at the fixed rate of HK\$5 on each instrument of transfer executed in relation to any transfer of the Registered Notes if the relevant transfer is required to be registered in Hong Kong.

## **CERTAIN ERISA CONSIDERATIONS**

The following is a summary of certain considerations associated with the purchase of the Notes by employee benefit plans that are subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended (“ERISA”), plans, individual retirement accounts and other arrangements that are subject to Section 4975 of the U.S. Internal Revenue Code of 1986, as amended (the “Code”) or provisions under any other federal, State, local, non-U.S. or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, “Similar Laws”), and entities whose underlying assets are considered to include “plan assets” of any such plan, account or arrangement (each, a “Plan”).

### **General Fiduciary Matters**

ERISA and the Code impose certain duties on persons who are fiduciaries of a Plan subject to Title I of ERISA or Section 4975 of the Code (an “ERISA Plan”) and prohibit certain transactions involving the assets of an ERISA Plan and its fiduciaries or other interested parties. Under ERISA and the Code, any person who exercises any discretionary authority or control over the administration of such an ERISA Plan or the management or disposition of the assets of such an ERISA Plan, or who renders investment advice for a fee or other compensation to such an ERISA Plan, is generally considered to be a fiduciary of the ERISA Plan.

In considering an investment in the Notes of a portion of the assets of any Plan, a fiduciary should determine whether the investment is in accordance with the documents and instruments governing the Plan and the applicable provisions of ERISA, the Code or any Similar Law relating to a fiduciary’s duties to the Plan including, without limitation, the prudence, diversification, delegation of control and prohibited transaction provisions of ERISA, the Code and any other applicable Similar Laws.

### **Prohibited Transaction Issues**

Section 406 of ERISA and Section 4975 of the Code prohibit ERISA Plans from engaging in specified transactions involving plan assets with persons or entities who are “parties in interest,” within the meaning of ERISA, or “disqualified persons,” within the meaning of Section 4975 of the Code, unless an exemption is available. A party in interest or disqualified person who engaged in a non-exempt prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and the Code. In addition, the fiduciary of the ERISA Plan that engaged in such a non-exempt prohibited transaction may be subject to penalties and liabilities under ERISA and the Code. The acquisition and/or holding of Notes by an ERISA Plan with respect to which the Issuer or a Dealer is considered a party in interest or a disqualified person may constitute or result in a direct or indirect prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless the investment is acquired and is held in accordance with an applicable statutory, class or individual prohibited transaction exemption. In this regard, the U.S. Department of Labour has issued prohibited transaction class exemptions, or “PTCEs,” that may apply to the acquisition and holding of the Notes. These class exemptions include, without limitation, PTCE 84-14 respecting transactions determined by independent qualified professional asset managers, PTCE 90-1 respecting insurance company pooled separate accounts, PTCE 91-38 respecting bank collective investment funds, PTCE 95-60 respecting life insurance company general accounts and PTCE 96-23 respecting transactions determined by in-house asset managers. In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provide limited relief from the prohibited transaction provisions of ERISA and Section 4975 of the Code for certain transactions, provided that neither the issuer of the securities nor any of its affiliates (directly or indirectly) have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any ERISA Plan involved in the transaction and provided further that the ERISA Plan pays no more than adequate consideration in

connection with the transaction. There can be no assurance that all of the conditions of any such exemptions will be satisfied.

Because of the foregoing, the Notes should not be purchased or held by any person investing “plan assets” of any Plan, unless such purchase and holding will not constitute a non-exempt prohibited transaction under ERISA and the Code or a similar violation of any applicable Similar Laws.

None of the Issuer, the Registrar, the Agents, the Dealers, the Arranger, or any of their respective affiliates (each, a “**Transaction Party**”, and collectively, the “**Transaction Parties**”) is undertaking to provide impartial investment advice, or to give advice in a fiduciary capacity, in connection with the acquisition of any of Notes by any Plan.

In addition, each purchaser of the Notes that is a Plan, including any fiduciary purchasing the Notes on behalf of a Plan or who represents the Plan with respect to such purchase, will be deemed to have represented by its purchase of the Notes that: none of the Transaction Parties has provided advice with respect to the acquisition of the Notes by the Plan.

## **Representation**

Accordingly, by acceptance of a Note or any beneficial interest therein, each purchaser and subsequent transferee of a Note or any beneficial interest therein will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser or transferee to acquire or hold the Note or any beneficial interest therein constitutes assets of any Plan or (ii) the acquisition, holding and disposition of the Notes or any beneficial interest therein by such purchaser or transferee will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under any applicable Similar Laws.

The foregoing discussion is general in nature and is not intended to be all inclusive. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries, or other persons considering purchasing the Notes on behalf of, or with the assets of, any Plan, consult with their counsel regarding the potential applicability of ERISA, Section 4975 of the Code and any Similar Laws to such investment and whether an exemption would be applicable to the purchase and holding of the Notes.

## SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

The Dealers have, in an amended and restated Programme Agreement dated 15 June 2012 (as amended and/or supplemented from time to time, the “Programme Agreement”), agreed with the Issuer a basis upon which they or any of them may from time to time agree to purchase Notes. Any such agreement for any particular purchase will extend to those matters stated under “Form of the Notes” and “Terms and Conditions of the Notes” above. In the Programme Agreement the Issuer has agreed to reimburse the Dealers for certain of their expenses in connection with the establishment and any future update of the Programme and the issue of the Notes under the Programme.

### Transfer Restrictions

**As a result of the following restrictions, purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale or other transfer of such Notes.**

Each purchaser of Registered Notes (other than a person purchasing an interest in a Registered Global Note with a view to holding it in the form of an interest in the same Global Note) or person wishing to transfer an interest from one Registered Global Note to another or from global to definitive form or vice versa, will be required to acknowledge, represent and agree, and each person purchasing an interest in a Registered Global Note with a view to holding it in the form of an interest in the same Global Note will be deemed to have acknowledged, represented and agreed, as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S are used herein as defined therein):

- (a) that either: (i) it is a QIB, purchasing (or holding) the Notes for its own account or for the account of one or more QIBs and it is aware that any sale to it is being made in reliance on Rule 144A or (ii) it is an Institutional Accredited Investor which has delivered an IAI Investment Letter or (iii) it is outside the United States and is not a U.S. person;
- (b) that the Notes are being offered and sold in a transaction not involving a public offering in the United States within the meaning of the Securities Act, and that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. State securities laws and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except as set forth below;
- (c) that, unless it holds an interest in a Regulation S Global Note and either is a person located outside the United States or is not a U.S. person, if in the future it decides to resell, pledge or otherwise transfer the Notes or any beneficial interests in the Notes, it will do so, prior to the date which is two years after the later of the last Issue Date for the Series and the last date on which the Issuer or an affiliate of the Issuer was the owner of such Notes, only (i) to the Issuer or any affiliate thereof, (ii) inside the United States to a person whom the seller reasonably believes is a QIB purchasing for its own account or for the account of a QIB in a transaction meeting the requirements of Rule 144A, (iii) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act, (iv) pursuant to the exemption from registration provided by Rule 144 under the Securities Act (if available) or (v) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable U.S. State securities laws;
- (d) it will, and will require each subsequent holder to, notify any purchaser of the Notes from it of the resale restrictions referred to in paragraph (c) above, if then applicable;
- (e) that Notes initially offered in the United States to QIBs will be represented by one or more Rule 144A Global Notes, that Notes offered to Institutional Accredited Investors will be in the form of Definitive

IAI Registered Notes and that Notes offered outside the United States in reliance on Regulation S will be represented by one or more Regulation S Global Notes;

- (f) that the Notes in registered form, other than the Regulation S Global Notes, will bear a legend to the following effect unless otherwise agreed to by the Issuer:

“THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (A) REPRESENTS THAT (1) IT IS A “QUALIFIED INSTITUTIONAL BUYER” (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) PURCHASING THE SECURITIES FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE QUALIFIED INSTITUTIONAL BUYERS OR (2) IT IS AN INSTITUTIONAL “ACCREDITED INVESTOR” (AS DEFINED IN RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT) (AN “INSTITUTIONAL ACCREDITED INVESTOR”); (B) AGREES THAT IT WILL NOT RESELL OR OTHERWISE TRANSFER THE SECURITIES EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND, PRIOR TO THE DATE WHICH IS TWO YEARS AFTER THE LATER OF THE LAST ISSUE DATE FOR THE SERIES AND THE LAST DATE ON WHICH THE ISSUER OR AN AFFILIATE OF THE ISSUER WAS THE OWNER OF SUCH SECURITIES OTHER THAN (1) TO THE ISSUER OR ANY AFFILIATE THEREOF, (2) INSIDE THE UNITED STATES TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (3) OUTSIDE THE UNITED STATES IN COMPLIANCE WITH RULE 903 OR RULE 904 UNDER THE SECURITIES ACT, (4) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (5) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES AND ANY OTHER JURISDICTION; AND (C) IT AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS SECURITY IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. NO REPRESENTATION CAN BE MADE AS TO THE AVAILABILITY OF THE EXEMPTION PROVIDED BY RULE 144A FOR REALES OF THE SECURITY.

THIS SECURITY AND RELATED DOCUMENTATION (INCLUDING, WITHOUT LIMITATION, THE AGENCY AGREEMENT REFERRED TO HEREIN) MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME, WITHOUT THE CONSENT OF, BUT UPON NOTICE TO, THE HOLDERS OF SUCH SECURITIES SENT TO THEIR REGISTERED ADDRESSES, TO MODIFY THE RESTRICTIONS ON AND PROCEDURES FOR REALES AND OTHER TRANSFERS OF THIS SECURITY TO REFLECT ANY CHANGE IN APPLICABLE LAW OR REGULATION (OR THE INTERPRETATION THEREOF) OR IN PRACTICES RELATING TO REALES OR OTHER TRANSFERS OF RESTRICTED SECURITIES GENERALLY. THE HOLDER OF THIS SECURITY SHALL BE DEEMED, BY ITS ACCEPTANCE OR PURCHASE HEREOF, TO HAVE AGREED TO ANY SUCH AMENDMENT OR SUPPLEMENT (EACH OF WHICH SHALL BE CONCLUSIVE AND BINDING ON THE HOLDER HEREOF AND ALL FUTURE HOLDERS OF THIS SECURITY AND ANY SECURITIES ISSUED IN EXCHANGE OR

SUBSTITUTION THEREFOR, WHETHER OR NOT ANY NOTATION THEREOF IS MADE HEREON).”;

- (g) if it is outside the United States and is not a U.S. person, that if it should resell or otherwise transfer the Notes prior to the expiration of the distribution compliance period (defined as 40 days after the later of the commencement of the offering and the closing date with respect to the original issuance of the Notes), it will do so only (i)(A) outside the United States in compliance with Rule 903 or 904 under the Securities Act or (B) to a QIB in compliance with Rule 144A and (ii) in accordance with all applicable U.S. State securities laws; and it acknowledges that the Regulation S Global Notes will bear a legend to the following effect unless otherwise agreed to by the Issuer:

“THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT. THIS LEGEND SHALL CEASE TO APPLY UPON THE EXPIRY OF THE PERIOD OF 40 DAYS AFTER THE COMPLETION OF THE DISTRIBUTION OF ALL THE NOTES OF THE TRANCHE OF WHICH THIS NOTE FORMS PART.”; and

- (h) that the Issuer and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Issuer; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Institutional Accredited Investors who purchase Registered Notes in definitive form offered and sold in the United States in reliance upon the exemption from registration provided by the Securities Act are required to execute and deliver to the Registrar an IAI Investment Letter. Upon execution and delivery of an IAI Investment Letter by an Institutional Accredited Investor, Notes will be issued in definitive registered form, see “Form of the Notes”.

The IAI Investment Letter will State, among other things, the following:

- (a) that the Institutional Accredited Investor has received a copy of the Information Memorandum and such other information as it deems necessary in order to make its investment decision;
- (b) that the Institutional Accredited Investor understands that the Notes are being offered and sold in a transaction not involving a public offering in the United States within the meaning of the Securities Act, and that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. State securities laws and that any subsequent transfer of the Notes is subject to certain restrictions and conditions set forth in the Information Memorandum and the Notes (including those set out above) and that it agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes except in compliance with, such restrictions and conditions and the Securities Act;
- (c) that, in the normal course of its business, the Institutional Accredited Investor invests in or purchases securities similar to the Notes;

- (d) that the Institutional Accredited Investor is an Institutional Accredited Investor within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act and has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Notes, and it and any accounts for which it is acting are each able to bear the economic risk of its or any such accounts' investment for an indefinite period of time;
- (e) that the Institutional Accredited Investor is acquiring the Notes purchased by it for its own account or for one or more accounts (each of which is an Institutional Accredited Investor) as to each of which it exercises sole investment discretion and not with a view to any distribution of the Notes, subject, nevertheless, to the understanding that the disposition of its property shall at all times be and remain within its control; and
- (f) that, in the event that the Institutional Accredited Investor purchases Notes, it will acquire
- (g) Notes having a minimum purchase price of at least U.S.\$500,000 (or the approximate equivalent in another Specified Currency).

No sale of Legended Notes in the United States to any one purchaser will be for less than U.S.\$100,000 (or its foreign currency equivalent) principal amount or, in the case of sales to Institutional Accredited Investors, U.S.\$500,000 (or its foreign currency equivalent) principal amount and no Legended Note will be issued in connection with such a sale in a smaller principal amount. If the purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least U.S.\$100,000 (or its foreign currency equivalent) or, in the case of sales to Institutional Accredited Investors, U.S.\$500,000 (or its foreign currency equivalent) principal amount of Registered Notes.

## **United States**

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act") and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act. Terms used in this paragraph have the meanings given to them by Regulation S under the Securities Act.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to a United States person, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986 and regulations thereunder. The applicable terms of the Notes will identify whether TEFRA D applies or whether TEFRA is not applicable.

In connection with any Notes which are offered or sold outside the United States in reliance on an exemption from the registration requirements of the Securities Act provided under Regulation S ("Regulation S Notes"), each Dealer has represented and agreed, and each other Purchaser will be required to represent and agree, that it will not offer, sell or deliver such Regulation S Notes (a) as part of their distribution at any time or (b) otherwise until 40 days after the completion of the distribution, as determined and certified by the relevant Dealer or, in the case of an issue of Notes on a syndicated basis, the relevant lead manager, of all Notes of the Tranche of which such Regulation S Notes are a part, within the United States or to, or for the account or benefit of, U.S. persons. Each Dealer has further agreed, and each other Purchaser will be required to agree, that it will send to each dealer to which it sells any Regulation S Notes during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Regulation S Notes within the United States or to, or for the account or benefit of, U.S. persons. Terms used in this paragraph have the meanings given to them by Regulation S under the Securities Act.

Until 40 days after the commencement of the offering of any Series of Notes, an offer or sale of such Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with an available exemption from registration under the Securities Act.

Dealers may arrange for the resale of Notes to QIBs pursuant to Rule 144A and each such purchaser of Notes is hereby notified that the Dealers may be relying on the exemption from the registration requirements of the Securities Act provided by Rule 144A. The minimum aggregate principal amount of Notes which may be purchased by a QIB pursuant to Rule 144A is U.S.\$100,000 (or the approximate equivalent thereof in any other currency). To permit compliance with Rule 144A in connection with any resales or other transfers of Notes that are “restricted securities” within the meaning of the Securities Act, the Issuer has undertaken in the Deed Poll to furnish, upon the request of a holder of such Notes or any beneficial interest therein, to such holder or to a prospective purchaser designated by him, the information required to be delivered under Rule 144A(d)(4) under the Securities Act if, at the time of the request, any of the Notes remain outstanding as “restricted securities” within the meaning of Rule 144(a)(3) of the Securities Act and the Issuer is neither a reporting company under Section 13 or 15(d) of the Exchange Act nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder.

Each issuance of Dual Currency Notes or Index Linked Notes shall be subject to such additional United States selling restrictions as the Issuer and the relevant Dealer may agree as a term of the issuance and purchase of such Notes, which additional selling restrictions shall be set out in the applicable Pricing Supplement.

### **Prohibition of Sales to UK Retail Investors**

Unless the Pricing Supplement in respect of any Notes specifies the “Prohibition of Sales to UK Retail Investors” as “Not Applicable”, each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by this Information Memorandum as completed by the final terms contained in the Pricing Supplement in relation thereto to any retail investor in the United Kingdom. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
  - (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the EUWA; or
  - (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the “**FSMA**”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or
  - (iii) not a qualified investor as defined in the UK Prospectus Regulation; and
- (b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

If the Pricing Supplement in respect of any Notes specifies the “Prohibition of Sales to UK Retail Investors” as ‘Not Applicable’, each Dealer represents and agrees, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not made and will not make an offer of Notes which are the subject of the offering contemplated by the Information Memorandum as completed by the Pricing Supplement

in relation thereto to the public in the United Kingdom except that it may make an offer of such Notes to the public in the United Kingdom:

- (a) if the Pricing Supplement in relation to the Notes specify that an offer of those Notes may be made other than pursuant to section 86 of the FSMA (a “**Public Offer**”), following the date of publication of a prospectus in relation to such Notes which either (i) has been approved by the Financial Conduct Authority, or (ii) is to be treated as if it had been approved by the Financial Conduct Authority in accordance with the transitional provision in Regulation 74 of the Prospectus (Amendment etc.) (EU Exit) Regulations 2019, provided that any such prospectus has subsequently been completed by the Prospectus contemplating such Public Offer, in the period beginning and ending on the dates specified in such prospectus or Pricing Supplement, as applicable, and the Issuer has consented in writing to its use for the purpose of that Public Offer;
- (b) at any time to any legal entity which is a qualified investor as defined in Article 2 of the UK Prospectus Regulation;
- (c) at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in Article 2 of the UK Prospectus Regulation) in the United Kingdom subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by the Issuer for any such offer; or
- (d) at any time in any other circumstances falling within Section 86 of the FSMA,

provided that no such offer of Notes referred to in (b) to (d) shall require the Issuer or any Dealer to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

For the purposes of this provision, the expression an “**offer of Notes to the public**” in relation to any Notes means the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe the Notes and the expression “**UK Prospectus Regulation**” means the Prospectus Regulation as it forms part of domestic law by virtue of the EUWA.

Each Dealer represents and agrees that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Notes in, from or otherwise involving the United Kingdom.

### **Prohibition of Sales to EEA Retail Investors**

Unless the Pricing Supplement in respect of any Notes specifies the “Prohibition of Sales to EEA Retail Investors” as “Not Applicable”, each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by this Information Memorandum as completed by the final terms contained in the Pricing Supplement in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:

- (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “**MiFID II**”); or
  - (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the “**Insurance Distribution Directive**”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
  - (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the “**Prospectus Regulation**”); and
- (b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

If the Pricing Supplement in respect of any Notes specifies the “Prohibition of Sales to EEA Retail Investors” as ‘Not Applicable’, in relation to each Member State of the European Economic Area, each Dealer represents and agrees, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not made and will not make an offer of Notes which are the subject of the offering contemplated by the Information Memorandum as completed by the Pricing Supplement in relation thereto to the public in that Member State except that it may make an offer of such Notes to the public in that Member State:

- (a) if the Pricing Supplement in relation to the Notes specify that an offer of those Notes may be made other than pursuant to Article 1(4) of the Prospectus Regulation in that Member State (a “**Non-exempt Offer**”), following the date of publication of a prospectus in relation to such Notes which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, provided that any such prospectus has subsequently been completed by the Pricing Supplement contemplating such Non-exempt Offer, in accordance with the Prospectus Regulation, in the period beginning and ending on the dates specified in such prospectus or Pricing Supplement, as applicable and the Issuer has consented in writing to its use for the purpose of that Non-exempt Offer;
- (b) at any time to any legal entity which is a qualified investor as defined in the Prospectus Regulation;
- (c) at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by the Issuer for any such offer; or
- (d) at any time in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Notes referred to in (b) to (d) above shall require the Issuer or any Dealer to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an “**offer of Notes to the public**” in relation to any Notes in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes and the expression “**Prospectus Regulation**” means Regulation (EU) 2017/1129, as amended.

## Japan

The Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended, the “Financial Instruments and Exchange Act”). Accordingly, each Dealer has represented and agreed that it has not, directly or indirectly, offered or sold and will not, directly or

indirectly, offer or sell any Notes in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organised under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and other relevant laws and regulations of Japan.

## **Korea**

The Notes may not be offered, delivered or sold directly or indirectly in Korea or to, or for the account or benefit of, any resident of Korea (as defined in the Foreign Exchange Transactions Act of Korea and the regulations thereunder), or to others for re-offering or resale directly or indirectly in Korea or to, or for the account or benefit of, any resident of Korea, except as otherwise permitted under applicable Korean laws and regulations.

## **Hong Kong**

Each Dealer has represented and agreed, and each other Purchaser will be required to represent and agree, that:

- (a) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Notes other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the “SFO”) and any rules made under the SFO; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the “C(WUMP)O”) or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and
- (b) it has not issued or had in its possession for the purposes of issue and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made under the SFO.

## **The Netherlands**

If the final terms (or Pricing Supplement, as the case may be) in respect of a Tranche of Notes specifies “Prohibition of Sales to EEA and UK Retail Investors” as “Not Applicable”, each Dealer has represented and agreed, and each further Dealer appointed under the Programme in respect of such Notes will be required to represent and agree, that the Notes (or any interest therein) are not and may not, directly or indirectly, be offered, sold, pledged, delivered or transferred in the Netherlands, on their issue date or at any time thereafter, and neither this Information Memorandum nor any other document in relation to any offering of the Notes (or any interest therein) may be distributed or circulated in the Netherlands, other than to qualified investors as defined in the Prospectus Regulation, provided that these parties acquire the Notes for their own account or that of another qualified investor. However, the Notes may be offered free of any restrictions in the Netherlands provided that each such Notes has a minimum denomination in excess of EUR 100,000 (or the equivalent thereof in non-Euro currency) and subject to compliance with the relevant requirements under the PRIIPs Regulation.

Zero Coupon Notes in definitive bearer form and other Notes in definitive bearer form on which interest does not become due and payable during their term but only at maturity (savings certificates or *spaarbewijzen* as defined in the Dutch Savings Certificates Act (*Wet inzake spaarbewijzen*; the “SCA”)) may only be transferred

and accepted, directly or indirectly, within, from or into the Netherlands through the mediation of either the Issuer or a member of Euronext Amsterdam N.V. with due observance of the provisions of the SCA and its implementing regulations (which include registration requirements). No such mediation is required, however, in respect of (i) the initial issue of such Notes to the first holders thereof, (ii) the transfer and acceptance by individuals who do not act in the conduct of a profession or business, and (iii) the issue and trading of such Notes if they are physically issued outside the Netherlands and are not distributed in the Netherlands in the course of primary trading or immediately thereafter.

## **Singapore**

Each Dealer has acknowledged, and each further Dealer appointed under the Programme will be required to acknowledge, that this Information Memorandum has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Information Memorandum or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act 2001 of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

- (i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(c)(ii) of the SFA;
- (ii) where no consideration is or will be given for the transfer;
- (iii) where the transfer is by operation of law;
- (iv) as specified in Section 276(7) of the SFA; or
- (v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

*Singapore SFA Product Classification:* In connection with Section 309B of the SFA and the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the “CMP Regulations 2018”), unless

otherwise specified before an offer of Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are ‘prescribed capital markets products’ (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

## **People’s Republic of China**

Each Dealer has represented and agreed that the Notes are not being offered or sold and may not be offered or sold, directly or indirectly, in the People’s Republic of China (for such purposes, not including the Hong Kong and Macau Special Administrative Regions or Taiwan), except as permitted by the applicable laws of the People’s Republic of China.

## **General**

Each Dealer has represented and agreed, and each other Purchaser will be required to represent and agree, that (to the best of its knowledge and belief) it will comply with all applicable laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers Notes or possesses or distributes this Information Memorandum and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Dealer shall have responsibility therefor. If a jurisdiction requires that an offering of Notes be made by a licenced broker or dealer and the Dealers or any affiliate of the Dealers is a licenced broker or dealer in that jurisdiction, such offering shall be deemed to be made by the Dealers or such affiliate on behalf of the Issuer in such jurisdiction.

None of the Issuer and the Dealers represents that Notes may at any time lawfully be sold in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to any exemption available thereunder, or assumes any responsibility for facilitating such sale.

With regard to each Tranche, the relevant Dealer will be required to comply with such other restrictions as the Issuer and the relevant Dealer shall agree and as shall be set out in the applicable Pricing Supplement.

The Dealers and certain of their affiliates may have performed certain investment banking and advisory services for the Issuer and/or its affiliates from time to time for which they have received customary fees and expenses and may, from time to time, engage in transactions with and perform services for the Issuer and/or its affiliates in the ordinary course of their business. The Dealers or certain of their affiliates may purchase Notes and be allocated Notes for asset management and/or proprietary purposes but not with a view to distribution.

The Dealers or their respective affiliates may purchase Notes for its or their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to Notes and/or other securities of the Issuer or its subsidiaries or associates at the same time as the offer and sale of Notes or in secondary market transactions. Such transactions would be carried out as bilateral trades with selected counterparties and separately from any existing sale or resale of Notes to which this Information Memorandum relates (notwithstanding that such selected counterparties may also be purchasers of Notes).

## **GENERAL INFORMATION**

### **1 Authorisation**

The establishment and update of the Programme and the issue of Notes under the Programme have been duly authorised by the approval of the Governor of the Bank of Korea dated 30 July 1996. The update of the Programme has been duly authorised by the internal approval of the Issuer dated 6 July 2022. However, further internal authorisations are required prior to the issue of Notes under the Programme.

A report with the Minister of Economy and Finance of Korea will be required for each Tranche of the Notes in an amount exceeding U.S.\$50 million with a maturity exceeding one year.

No other governmental approval is necessary for the issue of any Notes in Korea or for their sale and purchase in the secondary market outside Korea.

### **2 Listing of Notes on the SGX-ST**

Approval in-principle has been received from the SGX-ST for permission to deal in, and quotation of any Notes that may be issued pursuant to the Programme and which are agreed at the time of issue thereof to be so listed on the SGX-ST. Such permission will be granted when such Notes have been admitted to the Official List of the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made or opinions expressed or reports contained herein. Admission to the Official List of the SGX-ST and quotation of any Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, its subsidiaries, its associated companies, the Programme or such Notes.

For so long as any Notes are listed on the SGX-ST and the rules of the SGX-ST so require, such Notes will be traded on the SGX-ST in a minimum board lot size of S\$200,000 (or its equivalent in other currencies).

For so long as any Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Issuer shall appoint and maintain a paying agent in Singapore, where the Notes may be presented or surrendered for payment or redemption, in the event that a Global Note or Global Certificate is exchanged for definitive Notes. In addition, in the event that a Global Note or Global Certificate is exchanged for definitive Notes, an announcement of such exchange will be made by the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the paying agent in Singapore.

### **3 Significant or Material Change**

Save as disclosed in the Information Memorandum, there has been no significant change in the financial or trading position of the Issuer or its subsidiaries taken as a whole since 31 December 2020 and there has been no material adverse change in the financial position or prospects of the Issuer or its subsidiaries taken as a whole since 31 December 2021.

### **4 Documents on display and available for inspection**

Copies of the following documents may be inspected at the registered office of the Issuer and at the specified office of the Fiscal Agent during usual business hours on any weekday (Saturdays, Sundays and public holidays excepted) from the date hereof and throughout the life of the Programme:

- (i) the KDB Act, the Enforcement Decree and the By-Laws (in English);

- (ii) the audited financial statements of the Issuer (in English) as of and for each of the financial years ended 31 December 2020 and 2021;
- (iii) the most recently available financial statements of the Issuer and the most recently available unaudited interim financial statements (if any) of the Issuer (in English);
- (iv) the Programme Agreement, the Agency Agreement, the Deed of Covenant and the Deed Poll;
- (v) this Information Memorandum;
- (vi) any future prospectuses, offering circulars, information memoranda and supplements (including Pricing Supplements save that a Pricing Supplement relating to an unlisted Note will only be available for inspection by a holder of such Note and such holder must produce evidence satisfactory to the Issuer, or the Fiscal Agent, as the case may be, as to the identity of such holder) to this Information Memorandum and the documents incorporated therein by reference; and
- (vii) in the case of a syndicated issue of listed Notes, the subscription agreement (or equivalent document).

## **5 Auditor**

Tae Hyun Joo was appointed as the current statutory auditor of the Issuer on 15 March 2021. The business address of Tae Hyun Joo is 14 Eunhaeng-ro, Youngdeungpo-gu, Seoul 07242, Korea.

As of the date hereof, the external auditor of the Bank is Nexia Samduk, located at 12F, S&S Building, 48 Ujeongguk-ro, Jongno-gu, Seoul 03145, Korea.

## **6 Litigation**

There are no nor have there been any legal or arbitration proceedings including any such proceedings which are pending or threatened of which the Issuer is aware which may have or have had during the 12 months prior to the date hereof a significant effect on the financial position of the Issuer and its subsidiaries taken as a whole.

## **7 Clearing Systems**

The Notes have been accepted for clearance through the Euroclear and Clearstream, Luxembourg systems. The appropriate Common Codes for each issue allocated by Euroclear and Clearstream, Luxembourg will be contained in the relevant Pricing Supplement. Transactions will normally be effected for settlement not earlier than three days after the date of the transaction. The Issuer may also apply to have the Notes accepted for clearance through the CMU Service. The relevant CMU instrument number will be specified in the applicable Pricing Supplement. In addition, the Issuer may make an application for any Notes in registered form to be accepted for trading in book-entry form by DTC. The CUSIP and/or CINS numbers for each Tranche of such Registered Notes, together with the relevant ISIN, Common Code and the CMU instrument number, will be specified in the applicable Pricing Supplement. If the Notes are to clear through an additional or alternative clearing system the appropriate information will be specified in the applicable Pricing Supplement.

## DEALERS

<b>Australia and New Zealand Banking Group Limited</b> 22/F, Three Exchange Square 8 Connaught Place Central Hong Kong	<b>Barclays Bank PLC</b> 5 The North Colonnade Canary Wharf London E14 4BB United Kingdom	<b>BNP Paribas</b> 63/F, Two International Finance Centre 8 Finance Street Central Hong Kong	<b>Citigroup Global Markets Limited</b> Citigroup Centre Canada Square Canary Wharf London E14 5LB United Kingdom	<b>Commonwealth Bank of Australia</b> Level 21, Darling Park Tower 1 201 Sussex Street Sydney NSW 2010 Australia
<b>Crédit Agricole Corporate and Investment Bank</b> 30/F Two Pacific Place 88 Queensway Hong Kong	<b>Credit Suisse (Hong Kong) Limited</b> Level 88, International Commerce Centre 1 Austin Road West Kowloon Hong Kong	<b>Daiwa Capital Markets Singapore Limited</b> 7 Straits View Marina One East Tower #16-05 & #16-06 Singapore 018936	<b>Goldman Sachs International</b> Peterborough Court 133 Fleet Street London EC4A 2BB	<b>The Hongkong and Shanghai Banking Corporation Limited</b> Level 17 HSBC Main Building 1 Queen's Road Central Hong Kong
<b>ING Bank N.V., Singapore Branch</b> 1 Wallich Street #12-01 Guoco Tower Singapore 078881	<b>J.P. Morgan Securities plc</b> 25 Bank Street Canary Wharf London E14 5JP United Kingdom	<b>KDB Asia Limited</b> Suite 2005 – 2009 20/F Two International Finance Centre 8 Finance Street Central Hong Kong	<b>MUFG Securities EMEA plc</b> Ropemaker Place 25 Ropemaker Street London EC2Y 9AJ United Kingdom	<b>Mirae Asset Securities Co., Ltd.</b> East Tower, 26, Eulji-ro 5-gil Jung-gu Seoul 04539 Korea
<b>Merrill Lynch International</b> 2 King Edward Street London EC1A 1HQ United Kingdom	<b>Mizuho Securities Asia Limited</b> 12/F, Chater House 8 Connaught Road Central Hong Kong	<b>Morgan Stanley &amp; Co. International plc</b> 25 Cabot Square Canary Wharf London E14 4QA United Kingdom	<b>National Australia Bank Limited</b> Level 6 Three Pacific Place 1 Queen's Road East Hong Kong	<b>Natixis</b> 30, avenue Pierre Mendès-France 75013 Paris France
<b>Nomura Singapore Limited</b> 10 Marina Boulevard #36-01 Marina Bay Financial Centre Tower 2 Singapore 018983	<b>Société Générale</b> 29, boulevard Haussmann 75009 Paris France	<b>Standard Chartered Bank</b> One Basinghall Avenue London EC2V 5DD United Kingdom	<b>The Toronto-Dominion Bank</b> 60 Threadneedle Street London EC2R 8AP United Kingdom	<b>UBS AG Hong Kong Branch</b> 52nd Floor Two International Finance Centre 8 Finance Street Central Hong Kong
<b>Wells Fargo Securities International Limited</b> 33 King William Street London EC4R 9AT United Kingdom	<b>Wells Fargo Securities, LLC</b> 550 South Tryon Street 5th Floor Charlotte, North Carolina 28202 USA	<b>Westpac Banking Corporation</b> 12 Marina View #27-00 Asia Square Tower 2 Singapore 018961		

**REGISTERED OFFICE OF THE ISSUER**

**Korea Development Bank**

14 Eunhaeng-ro  
Youngdeungpo-gu  
Seoul 07242  
Korea

**FISCAL AGENT**

**Deutsche Bank AG, London Branch**

Winchester House  
1 Great Winchester Street  
London EC2N 2DB  
United Kingdom

**REGISTRAR<sup>1</sup>**

**Deutsche Bank AG, Hong Kong Branch**

Level 60  
International Commerce Centre  
1 Austin Road West  
Kowloon  
Hong Kong

**Deutsche Bank Luxembourg S.A.**

2 Boulevard Konrad Adenauer  
L-1115 Luxembourg

**Deutsche Bank Trust Company  
Americas**

60 Wall Street  
24th Floor  
New York, NY 10005  
United States of America

**TRANSFER AGENT<sup>2</sup>**

**Deutsche Bank AG, Hong Kong Branch**

Level 60  
International Commerce Centre  
1 Austin Road West  
Kowloon  
Hong Kong

**Deutsche Bank Luxembourg S.A.**

2 Boulevard Konrad Adenauer  
L-1115 Luxembourg

**Deutsche Bank Trust Company  
Americas**

60 Wall Street  
24th Floor  
New York, NY 10005  
United States of America

**EXCHANGE AGENT**

**Deutsche Bank AG, London Branch**

Winchester House  
1 Great Winchester Street  
London EC2N 2DB  
United Kingdom

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<sup>1</sup> Unless otherwise specified in the applicable Pricing Supplement, Deutsche Bank Trust Company Americas will act as Registrar.

<sup>2</sup> Unless otherwise specified in the applicable Pricing Supplement, Deutsche Bank AG, Hong Kong Branch and Deutsche Bank Luxembourg S.A. will act as Transfer Agent.

**CMU LODGING AGENT**

**Deutsche Bank AG, Hong Kong Branch**

Level 60  
International Commerce Centre  
1 Austin Road West  
Kowloon  
Hong Kong

**PAYING AGENTS**

**Credit Suisse AG**

P.O. Box, Paradeplatz 8  
CH-8070 Zürich  
Switzerland

**Deutsche Bank Luxembourg S.A.**

2 Boulevard Konrad Adenauer  
L-1115 Luxembourg

**Deutsche Bank Trust Company**

**Americas**  
60 Wall Street  
24th Floor  
New York, NY 10005  
United States of America

**LEGAL ADVISERS**

*to the Dealers*  
*(as to English and United States law)*

**Linklaters LLP**

Foreign Legal Consultant Office  
22F East Tower  
Mirae Asset Center 1  
26, Eulji-ro 5-gil, Jung-gu  
Seoul 04539  
Korea

*to the Issuer*  
*(as to Korean law)*

**Kim & Chang**

39, Sajik-ro 8-gil  
Jongno-gu  
Seoul 03170  
Korea

**AUDITORS**

**Nexia Samduk**

12F, S&S Building  
48 Ujeongguk-ro  
Jongno-gu, Seoul 03150  
Korea

**SINGAPORE LISTING AGENT**

**Linklaters Singapore Pte. Ltd.**

#17-01 One George Street  
Singapore 049145