IMPORTANT NOTICE

THIS DOCUMENT IS AVAILABLE ONLY TO INVESTORS WHO ARE NON-U.S. PERSONS WITH ADDRESSES OUTSIDE OF THE U.S.

IMPORTANT: You must read the following before continuing. If you are not the intended recipient of this message, please do not distribute or copy the information contained in this e-mail, but instead, delete and destroy all copies of this e-mail including all attachments. The following applies to the offering circular following this page, and you are therefore advised to read this carefully before reading, accessing or making any other use of the offering circular. In accessing the following offering circular, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from us as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES AND THE GUARANTEE DESCRIBED HEREIN HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE U.S. 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, 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 FOLLOWING OFFERING CIRCULAR MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER, AND IN PARTICULAR, MAY NOT BE FORWARDED TO ANY U.S. PERSON OR TO ANY U.S. ADDRESS. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS. ANY INVESTMENT DECISION SHOULD BE MADE ON THE BASIS OF THE FINAL TERMS AND CONDITIONS OF THE RELEVANT SECURITIES. IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORIZED AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED THEREIN.

Confirmation of your Representation: In order to be eligible to view the following offering circular or make an investment decision with respect to the securities, investors must not be a U.S. person (within the meaning of Regulation S under the Securities Act). By accepting the e-mail and accessing the following offering circular, you shall be deemed to have represented to us that (1) you are not a U.S. person nor are you acting on behalf of a U.S. person, the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States, its territories or possessions and, to the extent you purchase the securities described in the following offering circular, you will be doing so pursuant to Regulation S under the Securities Act and (2) you consent to the delivery of such offering circular and any amendments and supplements thereto by electronic transmission.

You are reminded that the following offering circular has been delivered to you on the basis that you are a person into whose possession the following offering circular may be lawfully delivered in accordance with the laws of jurisdiction in which you are located and you may not, nor are you authorized to, deliver or disclose the contents of the following offering circular to any other person. If this is not the case, you must return this offering circular to us immediately.

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 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 underwriter or any affiliate of the underwriter is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by the underwriter or such affiliate on behalf of the issuer in such jurisdiction.

The following offering circular 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 issuer, the guarantor, Credit Suisse (Hong Kong) Limited ("**CS**"), The Korea Development Bank ("**KDB**") nor UBS AG Hong Kong Branch ("**UBS**" and together with CS and KDB, the "**Managers**"), nor any person who controls any of them nor any director, officer, employee nor agent of any of them or affiliate of any such person accepts any liability or responsibility whatsoever in respect of any difference between the offering circular distributed to you in electronic format and the hard copy version available to you on request from the Managers.

You should not reply by e-mail to this announcement, and you may not purchase any securities by doing so. Any reply e-mail communications, including those you generate by using the "Reply" function on your e-mail software, will be ignored or rejected. 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.

STRICTLY CONFIDENTIAL

Offering Circular dated August 28, 2019

Korean Air Lines Co., Ltd.

US$300,000,000 2.000% Guaranteed Senior Unsecured Notes due 2022

Unconditionally and Irrevocably Guaranteed by

The Korea Development Bank

(a statutory juridical entity established under The Korea Development Bank Act of 1953, as amended, in the Republic of Korea)

Issue Price: 99.641%

The US$300,000,000 2.000% Guaranteed Senior Unsecured Notes (the "**Notes**") will be issued by Korean Air Lines Co., Ltd. (the "**Issuer**") and unconditionally and irrevocably guaranteed by The Korea Development Bank (the "**Guarantor**" or the "**Bank**" and such guarantee, the "**Guarantee**"). The Notes constitute direct, general and unsubordinated obligations of the Issuer which will be unsecured and will rank *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer (save for such as may be preferred by mandatory provision of applicable law). The Guarantee relating to the Notes constitutes a direct, general and unconditional obligation of the Guarantor which will be unsecured and will rank pari passu with all other present and future unsecured and unsubordinated obligations of the Guarantor (save for such as may be preferred by mandatory provision of applicable law).

The Notes will bear interest from and including September 4, 2019 (the "**Issue Date**") at a rate of 2.000 per cent. per annum. Interest will be payable semi-annually in arrear on March 4 and September 4 of each year (each an "**Interest Payment Date**," with the first Interest Payment Date falling on March 4, 2020 in respect of the period from and including the Issue Date to but excluding such Interest Payment Date).

Unless previously redeemed or purchased and canceled, the Notes will be redeemed at their outstanding principal amount on September 4, 2022 (the "**Maturity Date**"). The Notes are subject to redemption in whole, but not in part, at their outstanding principal amount together with any accrued but unpaid interest thereon, in the event of certain changes to tax laws. See "*Terms and Conditions of the Notes — Redemption*."

Investing in the Notes involves certain risks. See "*Risk Factors*" beginning on page 4.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "**SGX-ST**") for the listing and quotation of the Notes on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Offering Circular. Approval in-principle from, admission to the Official List of, and listing and quotation of the Notes on, the SGX-ST are not to be taken as an indication of the merits of the Issuer, the Guarantor or the Notes.

The Notes and the Guarantee have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**") and, subject to certain exceptions, 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 ("**Regulation S**") under the Securities Act), unless pursuant to an exemption from or in a transaction not subject to the registration requirements of the Securities Act. For a description of these and certain further restrictions on offers and sales of the Notes and the Guarantee and the distribution of this Offering Circular, see "*Subscription and Sale.*"

The Notes are expected to be rated "Aa2" by Moody's Investor Service ("**Moody's**") and "AA" by S&P Global Ratings, a division of S&P Global, Inc. ("**S&P**"). Such ratings of the Notes does not constitute a recommendation to buy, sell or hold the Notes and may be subject to revision or withdrawal at any time by such rating organizations. Such ratings should be evaluated independently of any other ratings of the Notes, the Issuer's or Guarantor's other securities or the Issuer or Guarantor.

The Notes will initially be represented by beneficial interests in a global certificate (the "**Global Certificate**") in registered form which will be registered in the name of a nominee of, and shall be deposited on or about September 4, 2019 with a common depositary for, Euroclear Bank SA/NV ("**Euroclear**") and Clearstream Banking S.A. ("**Clearstream**"). Beneficial interests in the Global Certificate will be shown on, and transfers thereof will be effected only through, records maintained by Euroclear and Clearstream. Except as described herein, certificates for Notes will not be issued in exchange for interests in the Global Certificate.

Joint Bookrunners and Lead Managers

Credit Suisse **KDB** **UBS**

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You should rely only on the information contained in this Offering Circular. Neither the Issuer, the Guarantor nor the Managers (as defined in "*Subscription and Sale*") has authorized anyone to provide you with information that is different or make any representation other than as contained in this Offering Circular in connection with the offering of the Notes. If anyone provides you with different or inconsistent information, you should not rely on it.

You should assume the information in this Offering Circular is accurate only as of the date of this Offering Circular or such other date as specified herein. The business, financial condition, results of operations and prospects of the Issuer or the Guarantor may have changed since that date. Neither the delivery of this Offering Circular nor any sale of the Notes made in connection with this Offering Circular will, under any circumstances, constitute a representation or create any implication that the information in this Offering Circular is correct as of any date subsequent to the date of this Offering Circular or that there have been no changes in the affairs of the Issuer or the Guarantor since the date of this Offering Circular. Statements contained in this Offering Circular as to the contents of any contract or other documents referred to in this Offering Circular may not set forth all of the terms and conditions of such contracts or other documents.

In making an investment decision, prospective investors must rely on their own examination of the Issuer and the Guarantor and the terms of the Notes and the Guarantee, including the merits and risks involved. Neither the Issuer nor the Guarantor is making any representation to any purchaser of the Notes regarding the legality of an investment in the Notes by such purchaser under any legal investment or similar laws or regulations. This Offering Circular should not be considered as a recommendation or constituting an invitation or offer by the Issuer, the Guarantor or the Managers that any recipient of this Offering Circular should purchase the Notes. You should not construe the contents of this Offering Circular as legal, business, accounting or tax advice. You should consult your own attorney, business adviser and tax adviser for legal, business and tax advice regarding an investment in the Notes.

The Issuer and the Guarantor have furnished the information contained in this Offering Circular. No representation, undertaking or warranty, express or implied, is made by the Managers, the Agents or any of their respective affiliates or advisers as to the accuracy or completeness of the information contained in this Offering Circular, and nothing contained in this Offering Circular is, or shall be relied upon as, a promise or representation by the Managers, the Agents or any of their respective affiliates or advisers. Neither the Managers nor the Agents assume responsibility for the accuracy, adequacy, reasonableness or completeness of any of the information contained in this Offering Circular or any other information (financial, legal or otherwise) provided by the Issuer or the Guarantor in connection with the issue or distribution of the Notes, the issue of the Guarantee or the future performance of the Notes or the Guarantee. Each person receiving this Offering Circular acknowledges that such person has not relied on the Managers, the Agents or any of their respective affiliates or advisers in connection with investigation of the accuracy of such information or such person's investment decisions.

This Offering Circular may only be used where it is legal to sell the Notes. None of the Issuer, the Guarantor and the Managers are making an offer to sell the Notes in any jurisdiction where the offer or sale is not permitted. This Offering Circular may not be used for, or in connection with, any offer to, or solicitation by, anyone in any jurisdiction in which it is unlawful to make such an offer or solicitation. The distribution of this Offering Circular and the offering of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Offering Circular may come must inform themselves about and observe these relevant restrictions. No action is being taken in any jurisdiction to permit an offering to the general public of the Notes or the distribution of this Offering Circular in any jurisdiction where action would be required for those purposes.

This Offering Circular is confidential. This Offering Circular has been prepared by the Issuer and the Guarantor solely for use in connection with the proposed offering of the Notes described in this Offering Circular. This Offering Circular is personal to each prospective investor and does not constitute an offer to any other person or to the public generally to subscribe for, or otherwise acquire, the Notes. Distribution of this Offering Circular to any person other than the prospective investor and any person retained to advise such prospective investor with respect to its purchase is unauthorized and any disclosure of any of its contents or use of such information for any purpose other than making an investment decision, without the prior written consent of the Issuer and the Guarantor, is prohibited. Each prospective investor, by accepting delivery of this Offering Circular, agrees to the foregoing.

The Notes are subject to restrictions on transferability and may not be transferred or resold except as permitted under applicable U.S. federal and state securities laws pursuant to a registration statement or an exemption from registration. Any investor who purchases the Notes will be deemed to have made acknowledgements, representations, warranties and agreements intended to restrict the resale or other transfer of the Notes, as set forth under "*Subscription and Sale — Transfer Restrictions*." As a prospective purchaser, you should be aware that you may be required to bear the financial risks of this investment for an indefinite period of time.

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 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).

In connection with this offering, the Managers (or person(s) acting on its behalf) may, subject to all applicable laws, rules and regulations, over-allot the Notes or effect transactions that stabilize or maintain the market price of the Notes at a higher level than the Notes might otherwise achieve in the open market for a limited period of time after the issue date. However, there is no assurance that the Managers (or person(s) acting on its behalf) will undertake stabilization action. Such stabilizing, if commenced, may be discontinued at any time and must be brought to an end after a limited period. For a description of these activities, see "*Subscription and Sale.*"

ENFORCEABILITY OF CIVIL LIABILITIES

The Guarantor is a statutory juridical entity established under The Korea Development Bank Act of 1953, as amended (the "**KDB Act**"), in the Republic of Korea ("**Korea**"). All of the officers and directors of the Guarantor named in this Offering Circular reside in Korea, and all or a substantial portion of the assets of the Guarantor and of such officers and directors are located outside the United States.

The Issuer is a corporation with limited liability organized under the laws of Korea. All of the officers and directors of the Issuer named in this Offering Circular reside in Korea, 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 you to effect service of process within the United States upon such persons or to enforce against them or the Issuer or the Guarantor in U.S. courts judgments predicated upon civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated on the U.S. federal securities laws.

AVAILABLE INFORMATION

Copies of the Fiscal Agency Agreement will be on file and available for inspection at the specified office of the Fiscal Agent (as defined in this Offering Circular) upon prior written request during normal office hours. In accordance with the Notes and the Fiscal Agency Agreement, the Fiscal Agent also will make available for inspection by holders of the Notes or, in certain cases, arrange for the mailing to such holders, certain documents or communications received from the Issuer or the Guarantor, as the case may be. See "*Terms and Conditions of the Notes.*"

PRESENTATION OF FINANCIAL INFORMATION

Each of the Issuer and the Guarantor maintains its financial books and records and prepares its financial statements in Won in accordance with International Financial Reporting Standards as adopted by Korea ("**Korean IFRS**" or "**K-IFRS**"). The Issuer's consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and as of and for the three months ended March 31, 2018 and 2019, and the Guarantor's separate financial statements as of and for the years ended December 31, 2017 and 2018 included in this Offering Circular have been prepared in accordance with Korean IFRS. References in this Offering Circular to "separate" financial statements and information are to financial statements and information prepared on a nonconsolidated basis. Unless otherwise specified, the Guarantor's financial and other information included in this Offering Circular is presented on a separate basis in accordance with Korean IFRS and does not include such information with respect to its subsidiaries.

CERTAIN DEFINED TERMS AND CONVENTIONS

All references to the "Issuer" in this Offering Circular are to Korean Air Lines Co., Ltd. and, unless otherwise specified or the context otherwise requires, its consolidated subsidiaries. All references to the "Guarantor" or the "Bank" in this Offering Circular are references to The Korea Development Bank.

In this Offering Circular, all references to "Korea" or the "Republic" are to the Republic of Korea, all references to "U.S." or the "United States" are to the United States of America, all references to the "PRC" are to the People's Republic of China, all references to "Hong Kong" are to the Hong Kong Special Administrative Region of the PRC, all references to the "EU" are to the European Union and all references to the "Government" are to the government of Korea.

Unless otherwise indicated, references to "KRW", "Won" and "₩" are to the currency of Korea, references to CNY, Renminbi and RMB are to the lawful currency of the PRC, references to "USD", "$", "US$" 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.

In this Offering Circular, where information has been prepared in thousands, millions or billions of units, amounts may have been rounded up or down. Accordingly, actual numbers may differ from those contained herein due to rounding. All discrepancies in any table between totals and the sums of the amounts listed are due to rounding.

FORWARD-LOOKING STATEMENTS

This Offering Circular includes future expectations, projections or "forward-looking statements", as defined in Section 27A of the Securities Act and Section 21E of the U.S. Securities Exchange Act of 1934, as amended. The words "believe", "expect", "anticipate", "estimate", "project" and similar words identify forward-looking statements. In addition, all statements other than statements of historical facts included in this Offering Circular are forward-looking statements. Although the Issuer and the Guarantor believe that the expectations reflected in the forward-looking statements are reasonable, no assurance can be given that such expectations will prove correct. This Offering Circular discloses important factors that could cause actual results to differ materially from the Issuer's or the Guarantor's expectations, including factors that could adversely affect the future performance of the Korean economy, as described below (collectively, the "**Cautionary Statements**"). All subsequent written and oral forward-looking statements attributable to the Issuer or the Guarantor or persons acting on behalf of either of them are expressly qualified in their entirety by the Cautionary Statements.

Factors that could adversely affect the future performance of the Korean economy include:

- continuing difficulties in the housing and financial sectors in the United States and elsewhere and the resulting adverse effects on the global financial markets;
- adverse conditions and volatility in the U.S. and worldwide credit and financial markets and the general weakness of the global economy;
- financial difficulties and resulting ratings downgrades experienced by the governments of Greece and other countries in Europe;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the U.S. dollar or Japanese Yen exchange rates or revaluation of the Chinese Renminbi), interest rates and stock markets;
- substantial decreases in the market prices of Korean real estate;
- increasing delinquencies and credit defaults by consumer and small- and medium-sized enterprise borrowers;
- declines in consumer confidence and a slowdown in consumer spending;
- adverse developments in the economies of countries that are important export markets for the Republic, such as the United States, Europe, Japan and China, or in emerging market economies in Asia or elsewhere;
- the continued emergence of the Chinese economy, to the extent its benefits (such as increased exports to China) are outweighed by its costs (such as competition in export markets or for foreign investment and the relocation of the manufacturing base from the Republic to China);
- social and labor unrest;
- a decrease in tax revenues and a substantial increase in the Government's expenditures for fiscal stimulus measures, unemployment compensation and other economic and social programs that, together, would lead to an increased government budget deficit;
- financial problems or lack of progress in the restructuring of Korean conglomerates, other large troubled companies, their suppliers or the financial sector;
- loss of investor confidence arising from corporate accounting irregularities and corporate governance issues at certain Korean conglomerates;
- the economic impact of any pending or future free trade agreements;
- geo-political uncertainty and risk of further attacks by terrorist groups around the world;
- the occurrence of severe health epidemics in Korea and other parts of the world;
- deterioration in economic or diplomatic relations between the Republic and its trading partners or allies, including deterioration resulting from trade disputes or disagreements in foreign policy, in particular the ongoing trade disputes with Japan;
- political uncertainty or increasing strife among or within political parties in the Republic;
- hostilities or unrest involving oil producing countries in the Middle East and Northern Africa and any material disruption in the supply of oil or increase in the price of oil;
- the occurrence of severe earthquakes, tsunamis or other natural disasters in Korea and other parts of the world, particularly in trading partners; and
- an increase in the level of tension or an outbreak of hostilities between the Democratic People's Republic of Korea ("**North Korea**") and the Republic or the United States.

SUMMARY

*The following is a brief summary of certain terms of this offering. For a more complete description of the terms of the Notes, see "Terms and Conditions of the Notes" in this Offering Circular (the "**Conditions**"). Terms used and not otherwise defined in this summary have the meaning given to them in the Conditions.*

Issuer	Korean Air Lines Co, Ltd., a corporation with limited liability established under the laws of Korea.
Notes	US$300,000,000 Guaranteed Senior Unsecured Notes due 2022.
Issue Price	99.641%.
Issue Date	September 4, 2019.
Form and Denomination	The Notes will be issued in registered form in denominations of US$200,000 and integral multiples of US$1,000 in excess thereof.
Status of the Notes	The Notes constitute direct, general and unsubordinated obligations of the Issuer which will be unsecured and will rank *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer (save for such as may be preferred by mandatory provision of applicable law).
Guarantor	The Korea Development Bank, a statutory juridical entity established under The Korea Development Bank Act of 1953, as amended, in Korea.
Guarantee	The Guarantor has given for the benefit of the Holders of the Notes an unconditional and irrevocable guarantee for the due and punctual payment of all sums from time to time payable by the Issuer in respect of the Notes as and when the same shall become due according to the Conditions. The Guarantee relating to the Notes constitutes a direct, general and unconditional obligation of the Guarantor which will be unsecured and will rank *pari passu* with all other present and future unsecured and unsubordinated obligations of the Guarantor (save for such as may be preferred by mandatory provision of applicable law). The Guarantee will remain in full effect until the payment of all sums payable in respect of the relevant Notes have been paid in full.
Interest Commencement Date	September 4, 2019.
Interest Payment Dates	March 4 and September 4 of each year, commencing on March 4, 2020, each subject to the following business day convention.
Rate of Interest	2.000 per cent. per annum, payable semi-annually in arrear.
Day Count Fraction	30/360.

Maturity Date	September 4, 2022.
Form and Denomination	The Notes will be issued in registered form in denominations of US$200,000 and integral multiples of US$1,000 in excess thereof. Upon issue, the Global Certificate will be deposited with, and registered in the name of a nominee of, a common depositary for, Euroclear and Clearstream.
Redemption at Maturity	Unless previously redeemed or purchased and canceled, the Notes will be redeemed at their outstanding principal amount on the Interest Payment Date falling on the Maturity Date.
Redemption for Tax Reasons	The Issuer may redeem the Notes in whole, but not in part, at their outstanding principal amount together with any accrued but unpaid interest thereon, in the event that the Issuer is obliged to pay Additional Amounts provided in Condition 8.1.
Taxation	All payments in respect of the Notes by or on behalf of the Issuer will be made free and clear of, and without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or on behalf of the Republic of Korea, unless the withholding or deduction of such taxes is required by law. In that event, the Issuer will pay such Additional Amounts as may be necessary in order that the net amounts received by the Holders after the withholding or deduction (including any withholding or deduction in respect of such payment of Additional Amounts) will equal the respective amounts which would otherwise have been receivable in respect of the Notes in the absence of the withholding or deduction.
Negative Pledge	The Notes will contain a negative pledge provision given by the Guarantor as described in Condition 3.2.
Cross Acceleration	The Notes will contain a cross-acceleration provision relating to indebtedness for money borrowed of the Issuer as described in Condition 11.4.
Governing Law	The Notes and the Guarantee are governed by, and will be construed in accordance with, the laws of the State of New York.
Rating	The Notes are expected to be rated "Aa2" by Moody's and "AA" by S&P. A rating is not a recommendation to buy, sell or hold the Notes and may be subject to revision or withdrawal at any time by the assigning rating organizations.
Fiscal Agent, Paying Agent and Transfer Agent (the "Agent") and Registrar	Deutsche Bank AG, Hong Kong Branch.

Listing	Approval in-principle has been received from the SGX-ST for the listing and quotation of the Notes on the SGX-ST. There can be no assurance, however, that the Issuer will obtain or be able to maintain a listing and quotation of the Notes on the SGX-ST. For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Notes, if traded on the SGX-ST, will be traded in a minimum board lot size of SGD200,000 (or its equivalent in foreign currencies). Accordingly, the Notes, if traded on the SGX-ST, will be traded in a minimum board lot size of US$200,000.
Use of Proceeds	The Issuer expects to use the net proceeds from the Offering for general corporate purposes, including repayment of existing debt. See "*Use of Proceeds.*"
Clearance and Settlement	The Notes have been accepted for clearance by Euroclear and Clearstream under the following codes: ISIN: XS2047474585 Common Code: 204747458 The Legal Entity Identifier (LEI) of the Issuer is 988400C2UFBF4B660C58.

RISK FACTORS

Investing in the Notes involves risks and uncertainties. Prospective purchasers of the Notes are advised to review carefully all of the information contained elsewhere in this Offering Circular and should consider, in particular, the following risk factors before purchasing the Notes. The risks described below are not the only ones that may be relevant to the Notes.

Risks Relating to the Notes

Payments under the Guarantee may be restricted under certain circumstances.

Under the Foreign Exchange Transactions Act and Presidential Decree and Regulations under that Act and Decree, the Government may impose any necessary restrictions on the remittance of payments out of Korea such as requiring the Guarantor to obtain prior approval from the Ministry of Economy and Finance, if the Government deems that certain emergency circumstances are likely to occur including but not limited to:

- sudden fluctuations in interest rates or exchange rates;
- extreme difficulty in stabilizing the balance of payments; or
- any substantial disturbance in the Korean financial or capital markets.

If the Guarantor cannot obtain prior approval from the Ministry of Economy and Finance under any such emergency circumstances, the Guarantor may not be able to make any payments under the Guarantee.

The rating assigned to the Notes may be suspended, lowered or withdrawn in the future.

The Notes are expected to be rated "Aa2" by Moody's and "AA" by S&P. The rating assigned to the Notes will have been based primarily on the Guarantee to be issued by the Guarantor with respect to the Notes. Pursuant to the Guarantee, the Guarantor will unconditionally and irrevocably guarantee the due and punctual payment of all sums from time to time payable by the Issuer in respect of the Notes as and when such sums become due (the "**Guaranteed Amounts**"). The payment of the Guaranteed Amounts will, therefore, depend on the Guarantor performing its obligations under the Guarantee, and the likelihood of payment of the Guaranteed Amounts will depend on the creditworthiness of the Guarantor. Consequently, investors are relying not only on the creditworthiness of the Issuer but also on the creditworthiness of the Guarantor to perform its obligations under the Guarantee. A significant deterioration in the financial condition of the Guarantor could adversely affect the likelihood of investors receiving Guaranteed Amounts under the Guarantee and could result in a downgrade or withdrawal of the rating of the Notes.

A rating is not a recommendation to buy, sell or hold the Notes and may be subject to revision, suspension or withdrawal at any time. There can be no assurance that a rating will remain for any given period of time or that a rating will not be lowered, suspended or withdrawn entirely by the relevant rating agency if in its judgment circumstances in the future so warrant. Neither the Issuer nor the Guarantor has an obligation to inform Holders of any such revision, downgrade or withdrawal. A reduction, suspension, or withdrawal at any time of the rating assigned to the Notes may adversely affect the market price of the Notes or a Holder's ability to dispose of the Notes.

The liquidity and price of the Notes may be volatile.

The price and trading volume of the Notes may be highly volatile. Factors such as variations in the Issuer's or the Guarantor's revenues, earnings and cash flows and proposals for new investments, strategic alliances and/ or acquisitions or dispositions, interest rates, fluctuations in price for comparable companies, government regulations and changes thereof applicable to the Issuer's or the Guarantor's industry, as well as general economic conditions in Korea or internationally, could cause the price of the Notes to fluctuate. Any such developments may result in large and sudden adverse changes in the trading volume and price of the Notes. There is no assurance that these developments will not occur in the future.

An active trading market for the Notes may not develop.

The Notes are a new issue of securities for which there is currently no trading market. No assurance can be given that the Issuer will obtain or be able to maintain a listing and quotation of the Notes on the SGX- ST or that an active trading market for the Notes will develop or as to the liquidity or sustainability of any such market, the ability of Holders to sell their Notes or the price at which Holders will be able to sell their Notes.

The Managers are not obliged to make a market in the Notes and any such market making, if commenced, may be discontinued at any time at the sole discretion of the Managers. Even if the Managers act as market makers for the Notes, the secondary market for the Notes may be limited and there is no assurance given as to the price offered by secondary market-makers or the impact of any such quoted prices on those available in the wider market. To the extent that the Notes become illiquid, an investor may have to hold the relevant Notes until maturity before it is able to realize value. Investors should note that a secondary market may be affected by both legal restrictions in certain jurisdictions and by the Issuer and/or the Managers purchasing or holding the Notes.

The Notes contain provisions regarding meetings, modification, waivers and substitution which may affect the rights of Holders.

The Conditions of the Notes and the Fiscal Agency Agreement contain provisions for calling meetings of Holders to consider matters affecting their interests generally. These provisions permit defined majorities to bind all Holders including Holders who did not attend and vote at the relevant meeting and Holders who voted in a manner contrary to the majority.

The Conditions of the Notes also provide that the Fiscal Agent may agree, without the consent of Holders, to the waiver or authorization of any breach or proposed breach of, any of the Conditions of the Notes or any of the provisions of the Fiscal Agency Agreement, or may agree, among other things, to make any modifications to the Notes or the Fiscal Agency Agreement of a formal, minor or technical nature or necessary in the reasonable opinion of the Fiscal Agent to correct a manifest error or to comply with mandatory provisions of the laws of Korea.

The Notes will be represented by a Global Certificate and holders of a beneficial interest in the Global Certificate must rely on the procedures of the relevant Clearing System(s).

Notes issued will be represented by the Global Certificate. Such Global Certificate will be deposited with a common depositary for Euroclear and Clearstream (each of Euroclear and Clearstream, a "**Clearing System**"). Except in the circumstances described in the relevant Global Certificate, Holders will not be entitled to receive definitive note certificates. The relevant Clearing System(s) will maintain records of the beneficial interests in the Global Certificate. While the Notes are represented by the Global Certificate, Holders will be able to trade their beneficial interests only through the Clearing Systems.

While the Notes are represented by the Global Certificate, the Issuer (or failing which, the Guarantor under the Guarantee) will discharge its payment obligations under the Notes by making payments to the relevant Clearing System for distribution to their account holders. A holder of a beneficial interest in the Global Certificate must rely on the procedures of the relevant Clearing System(s) to receive payments under the relevant Notes. Neither the Issuer nor the Guarantor has any responsibility or liability for the records relating to, or payments made in respect of, beneficial interests in the Global Certificate.

Holders of beneficial interests in the Global Certificate will not have a direct right to vote in respect of the relevant Notes. Instead, such holders will be permitted to act only to the extent that they are enabled by the relevant Clearing System(s) to appoint appropriate proxies.

TERMS AND CONDITIONS OF THE NOTES

The following terms and conditions will be endorsed on the back of the Definitive Certificates (as defined below) issued in respect of the Notes:

The US$300,000,000 2.000 per cent. guaranteed senior unsecured notes (the "**Notes**," which expression, unless the context otherwise requires, includes any further Notes issued pursuant to Condition 10 and forming a single series with the Notes) of Korean Air Lines Co., Ltd. (the "**Issuer**") are issued under a fiscal agency agreement dated September 4, 2019 (as amended from time to time, the "**Fiscal Agency Agreement**"), among the Issuer, The Korea Development Bank as the guarantor (the "**Guarantor**") and Deutsche Bank AG, Hong Kong Branch, as fiscal agent (the "**Fiscal Agent**," which expression shall include its successor(s)), paying agent (the "**Paying Agent**," which expression shall include its successor(s)), transfer agent (the "**Transfer Agent**," which expression shall include its successor(s)) and registrar (the "**Registrar**," which expression shall include its successor(s)). References herein to the "**Agents**" are to the Fiscal Agent, the Paying Agent, the Transfer Agent and the Registrar, and any reference to an "**Agent**" is to any one of them. The Notes are issued, and may or must be redeemed by the Issuer, on the terms set out in these Terms and Conditions (the "**Conditions**").

The statements in these Conditions include summaries of, and are subject to, the detailed provisions of the Fiscal Agency Agreement. Copies of the Fiscal Agency Agreement are available for inspection upon reasonable prior notice with proof of holding statement during normal business hours by the Holders (as defined below) at the specified office of the Fiscal Agent. Holders are deemed to have notice of those provisions applicable to them of the Fiscal Agency Agreement.

1. FORM AND TRANSFER

1.1 Form and Principal Amount

The Notes are in registered form and are issued on their date of issue and transferable in minimum principal amounts (the "**Principal Amount**") of US$200,000 and integral multiples of US$1,000 in excess thereof. A security certificate (a "**Definitive Certificate**") will be issued to each Holder in respect of its registered holding of Notes. Each Definitive Certificate will be numbered serially with an identifying number which will be recorded on the relevant certificate and in the register of Holders (the "**Register**") which the Issuer will procure to be kept by the Registrar. The Notes will initially be represented by one or more certificates in global form (each, a "**Global Certificate**"). No individual certificates will be issued to Holders except upon the circumstances set forth in the Fiscal Agency Agreement. The Notes will be issued at the Issue Price.

1.2 Title

Title to the Notes passes only by registration in the Register. The holder of any Note will (except as otherwise required by law) be treated as its absolute owner for all purposes (regardless of any notice of ownership, trust or any interest or any writing on, or the theft or loss of, the Definitive Certificate issued in respect of it) and no person will be liable for so treating the holder. In these Conditions, "**Holder**" and (in relation to a Note) "**holder**" means the person in whose name a Note is registered in the Register (or, in the case of a joint holding, the first named thereof).

2. TRANSFERS OF NOTES AND ISSUE OF DEFINITIVE CERTIFICATES

2.1 Transfers

Subject as provided in Condition 2.4, a Note may be transferred by depositing the Definitive Certificate issued in respect of that Note, with the form of transfer on the back duly completed and signed, at the specified office of the Fiscal Agent (or, in the case of a Note represented by a Global Certificate, delivery of a duly executed form of transfer as set forth in the Fiscal Agency Agreement), together with such evidence as the Fiscal Agent may reasonably require to prove title to the Notes that are the subject of the transfer and the authority of the individuals who have executed the form of transfer. Legal title to the Notes will pass upon registration of such transfer in the Register.

All transfers of Notes and entries in the Register will be made subject to the terms concerning transfers of Notes provided in the Fiscal Agency Agreement.

2.2 **Delivery of new Definitive Certificates**

Each new Definitive Certificate to be issued upon transfer of Notes will, within five Business Days of receipt by the Fiscal Agent of the duly completed form of transfer endorsed on the relevant Definitive Certificate, be mailed by uninsured mail at the risk of the holder entitled to the Note to the address specified in the form of transfer.

Where some but not all of the Notes in respect of which a Definitive Certificate is issued are to be transferred, a new Definitive Certificate in respect of the Principal Amount of Notes not so transferred will, within 10 Business Days of receipt by the Fiscal Agent of the original Definitive Certificate, be mailed by uninsured mail at the risk of the holder of the Notes not so transferred to the address of such holder appearing on the Register (or, in the case of a joint holding, the first named thereof).

2.3 **Formalities free of charge**

Registration of transfer of Notes will be effected without charge by or on behalf of the Issuer or the Fiscal Agent but upon payment (or the giving of such indemnity as the Issuer or the Fiscal Agent may reasonably require) in respect of any tax or other governmental charges which may be imposed on the Issuer or the Fiscal Agent (as the case may be) in relation to such transfer.

2.4 **Closed periods**

No Holder may require the transfer of a Note to be registered during the period of 15 days ending on the due date for any payment of any principal or interest on that Note.

3. STATUS AND NEGATIVE PLEDGE

3.1 **Status of the Notes**

The Notes constitute direct, general and unsubordinated obligations of the Issuer which will be unsecured and will rank *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer (save for such as may be preferred by mandatory provision of applicable law).

3.2 **Negative pledge**

So long as any of the Notes remains outstanding, the Guarantor 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 Guarantee (as defined below) is secured equally and ratably therewith, except that the Guarantor 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 Guarantor where such Encumbrance is created in favor of The Bank of Korea in the normal operation of its discount facilities or its facilities for the funding of loans by the Guarantor to customers of the Guarantor; or

(ii) any Encumbrance over or affecting any asset of the Guarantor which has been created or granted in relation to any of the Guarantor’s transactions with The Bank of Korea; or

(iii) any Encumbrance over any immovable property owned by the Guarantor as security for the repayment by the Guarantor to a tenant of that property of any security deposit paid by such tenant to the Guarantor upon taking a tenancy or lease of that property; or

(iv) 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 Guarantor, provided that the amount of such transaction (when aggregated with the amount of any other such transactions) does not exceed 15% of the borrowing liabilities of the Guarantor as set out in the latest audited separate balance sheet of the Guarantor; or

(v) 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 Guarantor, which is granted in favor of the Secured Counterparty in connection with (a) a loan or other indebtedness denominated in a currency other than the Denominated Currency of the Guarantor or any of its subsidiaries or related entities owed to the Secured Counterparty (the "**Reciprocal Loan**") and (b) the Guarantor 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 Guarantor and the aggregate outstanding principal amount of the Loan Assets of the Guarantor which are subject to such Encumbrance does not exceed 5% of the borrowing liabilities of the Guarantor as set out in the latest audited separate balance sheet of the Guarantor; or

(vi) any statutory liens arising in the ordinary course of the Guarantor's business; or any Encumbrance arising or preference given under the law of Korea, applicable generally to corporations established under the law of Korea, by virtue of a failure by the Guarantor 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 Guarantor (or documents of title thereto) or arising in connection with improvements to any asset of the Guarantor as security for the unpaid balance of the purchase price thereof or costs of improvement thereto; or

(viii) any Encumbrance constituted by any netting or set-off arrangement entered into by the Guarantor in the ordinary course of its banking arrangements for the purpose of netting debit and credit balances; or

(ix) any Encumbrance constituted in respect of any payment or close out netting or set-off arrangement pursuant to any hedging transaction entered into by the Guarantor for the purpose of:

a. hedging any risk to which the Guarantor is exposed in its ordinary course of trading; or

b. its interest rate or currency management operations which are carried out in the ordinary course of business and for non-speculative purposes only, excluding, in any case, any Encumbrance under a credit support arrangement in relation to a hedging transaction; or

(x) any Encumbrance securing indebtedness the principal amount of which (when aggregated with the principal amount of any other indebtedness which has the benefit of an Encumbrance given by the Guarantor other than any permitted under paragraphs (i) to (vi) above) does not exceed 1% of the net capital of the Guarantor based on the then most recent annual separate financial statements of the Guarantor.

For the purposes of these Conditions, "**Encumbrance**" means any mortgage, charge, encumbrance, pledge or other security interest.

4. GUARANTEE

Pursuant to the guarantee set out in Section 3 of the Fiscal Agency Agreement as evidenced by the notation of guarantee dated September 4, 2019 (the "**Guarantee**"), the Guarantor has given for the benefit of the Holders an unconditional and irrevocable guarantee for the due and punctual payment of all sums from time to time payable by the Issuer in respect of the Notes, including without limitation the principal of, and interest on, such Notes, as and when the same shall become due according to these Conditions. The Guarantee relating to the Notes constitutes a direct, general and unconditional obligation of the Guarantor which will be unsecured and will rank *pari passu* with all other present and future unsecured and unsubordinated obligations of the Guarantor (save for such as may be preferred by mandatory provision of applicable law). The Guarantee will remain in full effect until the payment of all sums payable in respect of the relevant Notes have been paid in full.

5. INTEREST

5.1 Interest Payment Dates

The Notes bear interest from and including September 4, 2019 and such interest will be payable on each March 4 and September 4 (each, an "**Interest Payment Date**"). If any Interest Payment Date would otherwise fall on a day which is not a Business Day, it shall be postponed to the next day which is a Business Day. The period beginning on September 4, 2019 and ending on (but excluding) the first Interest Payment Date and each successive period beginning on an Interest Payment Date and ending on (but excluding) the next succeeding Interest Payment Date is called an "**Interest Period**".

If interest is required to be calculated for a period of less than a complete Interest Period, the relevant day–count fraction will be determined on the basis of a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the number of days elapsed.

5.2 Interest Payments

Each Note will cease to bear interest from the due date for redemption unless, after surrender of the relevant Definitive Certificate, payment of principal is improperly withheld or refused. In such event, it shall continue to bear interest at the rate set forth in Condition 5.3 (both before and after judgment) until whichever is the earlier of (i) the day on which all sums due in respect of such Note up to that day are received by or on behalf of the relevant Holder, and (ii) the day seven days after the Fiscal Agent has notified Holders of receipt of all sums due in respect of all the Notes up to that seventh day (except to the extent that there is failure in the subsequent payment to the relevant holders under these Conditions or any payment by the Issuer has subsequently become void).

5.3 Rate of Interest

Interest on the Notes will accrue from and including September 4, 2019 at the rate of 2.000% per annum.

6. REDEMPTION

6.1 Maturity

Unless previously redeemed, or purchased and cancelled, the Notes will be redeemed at their principal amount on September 4, 2022 (the "**Maturity Date**"). The Notes may not be redeemed at the option of the Issuer other than in accordance with Condition 6.2.

6.2 Early redemption for tax reasons

The Notes may be redeemed at the option of the Issuer in whole, but not in part, on any Interest Payment Date, at their outstanding principal amount together with any accrued but unpaid interest thereon, on giving not less than 30 nor more than 60 days' notice to the Fiscal Agent and the Guarantor and, in accordance with Condition 13, the Holders (which notice shall be irrevocable), if:

(a) 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 8 as a result of any change in, or amendment to, the laws or regulations of a Relevant Jurisdiction or any change in the application or official interpretation of such laws or regulations, which (including the cessation of tax exemptions presently applicable) change or amendment becomes effective on or after August 28, 2019; and

(b) such obligation cannot be avoided by the Issuer taking reasonable measures available to it.

6.3 **Cancellations**

All Notes which are (a) redeemed or (b) purchased by or on behalf of the Issuer, or any of the Issuer's Subsidiaries and which the Issuer elects to cancel, will forthwith be cancelled.

7. PAYMENTS

7.1 Payments of principal and interest in respect of each Note will be made by transfer to the registered account of the Holder provided that the bank account details are received by the Paying Agent not later than 10 Payment Business Days before any date on which payment is scheduled. Interest on Notes due on an Interest Payment Date will be paid to the holder shown on the Register on the Record Date (as defined on the face of the applicable Global Certificate or Definitive Certificate).

A Holder's "**registered account**" means the U.S. dollar account maintained by or on behalf of it with a bank that processes payments in U.S. dollars, details of which appear on the Register at the close of business on the relevant Record Date, and a Holder's "**registered address**" means its address appearing on the Register at that time.

7.2 Where payment is to be made by transfer to a registered account, payment instructions (for value the due date or, if that is not a Payment Business Day, for value the first following day which is a Payment Business Day) will be initiated and, where payment is to be made by check, the check will be mailed on the due date for payment, or if that is not a Payment Business Day, on the next succeeding Payment Business Day, without any interest or payment in respect of such delay.

7.3 Payments in respect of amounts payable by way of interest and on redemption of the Notes will be subject in all cases to: (i) any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 8; 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 (the "**Code**") or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or (without prejudice to the provisions of Condition 8) any law implementing an intergovernmental approach thereto. No commissions or expenses shall be charged to the Holders in respect of such payments.

7.4 In this Condition, "**Payment 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 the city in which the Paying Agent has its registered office from time to time; and (b) a day on which banks are open for business in New York, Hong Kong, London and Seoul.

7.5 Unless the context otherwise requires, any reference in these Conditions to principal in respect of the Notes shall be deemed to include any other amounts (other than interest) which may be payable by the Issuer under or in respect of the Notes.

8. TAXATION AND GROSS-UP

8.1 Payment without withholding

All payments in respect of the Notes by or on behalf of the Issuer will be made free and clear of, and without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or on behalf of a Relevant Jurisdiction ("**Relevant Taxes**"), unless the withholding or deduction of such Relevant Taxes is required by law. In that event, the Issuer will pay such additional amounts ("**Additional Amounts**") as may be necessary in order that the net amounts received by the Holders after the withholding or deduction (including any withholding or deduction in respect of such payment of Additional Amounts) will equal the respective amounts which would otherwise have been receivable in respect of the Notes in the absence of withholding or deduction; except that no Additional Amounts will be payable in relation to any Relevant Taxes imposed on, withheld or deducted from any payment in respect of any Note:

(a) held by or on behalf of a Holder or beneficial owner who is liable for such Relevant Taxes in respect of such Note by reason of having some connection with the Relevant Jurisdiction other than the mere holding of the Note or the receipt of payments or enforcement of rights thereunder; or

(b) held by or on behalf of a Holder or beneficial owner who is liable for such Relevant Taxes in respect of the Note by reason of having some relationship with the Issuer for Korean tax purposes other than the mere holding of such Note; or

(c) where such withholding or deduction is imposed by reason of a failure of a Holder or any other person to (i) comply with any certification, identification, information-provision or documentation requirement concerning the nationality, residence, identity or connection with the Relevant Jurisdiction of the Holder or beneficial owner or (ii) comply with any other certification, identification, information-provision or documentation requirement, or enter into any agreement with any taxing authority, provided that (x) the Issuer or the Fiscal Agent has given the Holder at least 30 calendar days prior notice of an opportunity to satisfy such a requirement and (y) compliance is required or imposed by a statute, treaty, rule, regulation, agreement or administrative practice of the Relevant Jurisdiction as a condition or precondition to relief or exemption from all or part of such Relevant Taxes; or

(d) where such withholding or deduction is imposed only by virtue of a Holder or any other person not having presented the Note (where presentation is required) for payment within 30 days after the date on which such payment becomes due and payable or the date on which such payment thereof is duly provided for, whichever occurs earlier, except to the extent such Holder or other person would be entitled to Additional Amounts had the Note been surrendered during such 30-day period; or

(e) in the event that a Holder or any other person who holds an interest in the Note is a fiduciary, a partnership or any person other than the sole beneficial owner of such payment, where such withholding or deduction would not have been imposed had the beneficiary or settlor with respect to such fiduciary, member of such partnership or beneficial owner of such payment been the actual Holder of the Note; or

(f) where such withholding or deduction is imposed as a result of any combination of (a) through (e) above.

Additionally, the obligation of the Issuer to pay such Additional Amounts shall not apply with respect to (i) any estate, inheritance, gift, sales, transfer or personal property tax or any similar taxes, duties, assessments or other governmental charges or (ii) any taxes, duties, assessments or other governmental charges that are payable otherwise than by deduction or withholding from payments on the Notes.

8.2 Additional Amounts

Any reference in these Conditions to any amounts in respect of the Notes will be deemed to include any Additional Amounts which may be payable under Condition 8.1 or under any undertakings given in substitution for Condition 8.1 pursuant to the Fiscal Agency Agreement.

8.3 **Documentation**

The Issuer will provide the Fiscal Agent with the official acknowledgment, if any, of the Relevant Jurisdiction (or, if such acknowledgment is not available, other reasonable documentation) evidencing payment of any Relevant Taxes in respect of which the Issuer has paid any Additional Amounts. Copies of such documentation will be made available to the Holders or beneficial owners of the Notes by the Fiscal Agent upon written request therefor.

8.4 **Other Taxes**

The Issuer will pay any stamp, issue, excise, registration, documentary or other similar taxes and duties, including interest and penalties, imposed by a Relevant Jurisdiction in respect of the creation, issue, delivery, registration and offering of the Notes. The Issuer will also pay and indemnify the Holders and beneficial owners of the Notes from and against all court taxes or other taxes and duties, including interest and penalties, paid by any of them in any jurisdiction in connection with any action permitted to be taken by the Holders and beneficial owners to enforce the Issuer's obligations under the Notes.

9. PRESCRIPTION

A claim against the Issuer or the Guarantor for payment under these Conditions will become void unless made within periods of 10 years (in the case of principal) and five years (in the case of interest) from the Relevant Date relating thereto.

10. FURTHER ISSUES

Subject to applicable law, the Issuer may from time to time without the consent of the Holders create and issue further securities or incur further debt obligations either (a) ranking *pari passu* in all respects (or in all respects save for the first payment of Interest Amount thereon) and so that the same will be consolidated and form a single series with the Notes (provided, however, that any such issuance of securities shall be subject to the prior written consent of the Guarantor); or (b) upon such terms as to ranking, distributions or interest, conversion, redemption and otherwise as the Issuer may determine at the time of issue.

11. EVENTS OF DEFAULT

The holder of any Note may give written notice to the Issuer and the Guarantor that the Note is, and it shall accordingly forthwith become, immediately due and repayable at its principal amount, together with interest accrued to the date of repayment, if any of the following events ("**Events of Default**") shall have occurred and be continuing, provided that such notice is given in accordance with Condition 13:

11.1 **Non-payment of principal**: default in the payment of principal of the Notes when the same becomes due and payable, and such failure continues for a period of 14 consecutive days; or

11.2 **Non-payment of interest**: default in the payment of interest or Additional Amounts on any Note when the same becomes due and payable, and such default continues for a period of 30 consecutive days; or

11.3 **Breach of other obligations**: default in the performance of or breaches of any other covenant or agreement under the Notes (other than a default specified in clause 11.1 or 11.2 above) and such default or breach continues for a period of 30 consecutive days after written notice of such default or breach to the Issuer by any Holder of Notes; or

the Issuer's Events of Default:

11.4 **Cross-acceleration**: there occurs with respect to any Indebtedness of the Issuer or any of its Subsidiaries having an outstanding principal amount of US$15.0 million or more in the aggregate for all such

Indebtedness of all such persons, whether such Indebtedness now exists or shall hereafter be created, (1) an event of default that has caused any holder thereof to declare such Indebtedness to be due and payable prior to its stated maturity and/or (2) the failure to make a principal payment when due; or

11.5 **Final judgment**: one or more final judgments or orders for the payment of money are rendered against the Issuer or any of its Significant Subsidiaries and are not paid or discharged, and there is a period of 60 consecutive days following entry of the final judgment or order that causes the aggregate amount for all such final judgments or orders outstanding and not paid or discharged against all such Persons to exceed US$15.0 million (in excess of amounts that the Issuer's insurance carriers have agreed to pay under applicable policies) during which a stay of enforcement, by reason of a pending appeal or otherwise, is not in effect; or

11.6 **Insolvency**: an involuntary case or other proceeding is commenced against the Issuer or any of its Significant Subsidiaries with respect to it or its debts under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect seeking the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Issuer or any of its Significant Subsidiaries or for any substantial part of the property and assets of the Issuer or any of its Significant Subsidiaries and such involuntary case or other proceeding remains undismissed and unstayed for a period of 60 consecutive days; or an order for relief is entered against the Issuer or any of its Significant Subsidiaries under any applicable bankruptcy, insolvency or other similar law as now or hereafter in effect; or

11.7 **Voluntary insolvency**: the Issuer or any of its Significant Subsidiaries (1) commences a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (2) consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Issuer or any of its Significant Subsidiaries, or for all or substantially all of the property and assets of the Issuer or any of its Significant Subsidiaries, or (3) effects any general assignment for the benefit of creditors; or

the Guarantor's Events of Default:

11.8 **Guarantee**: the Guarantee ceases to be in full force and effect; or

11.9 **Validity of Guarantee**: the validity of the Guarantee is contested by the Guarantor or the Guarantor shall deny any of the Guarantor's obligations under the Guarantee or it is or will become unlawful for the Guarantor to perform or comply with any of its obligations under or in respect of the Guarantee or the Fiscal Agency Agreement or any of such obligations shall be or become unenforceable or invalid; or any External Indebtedness (as defined below) of the Guarantor in an aggregate principal amount of US$10.0 million or more becomes due and payable prior to the due date for payment thereof by reason of default by the Guarantor; or

11.10 **Moratorium**: 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 or any segregation or other preferential arrangement (whether or not constituting an encumbrance) for the benefit of any creditor or class of creditors; or

11.11 **Bankruptcy**: the Guarantor 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 Guarantor 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 Guarantor or a substantial part of its assets or the Guarantor is wound up or dissolved or the Guarantor ceases to carry on the whole or substantially the whole of its business.

12. VARIATION OF RIGHTS

12.1 Variation without consent

The Fiscal Agent may agree with the Issuer and the Guarantor, without the approval of Holders, to amend, modify, alter or add to either these Conditions or the provisions of the Fiscal Agency Agreement, if the Fiscal Agent is of the opinion that the amendment, modification, alteration or addition is:

(a) of a formal, minor or technical nature;

(b) made to correct an error which, in the opinion of the Fiscal Agent, is proven; or

(c) required to comply with mandatory provisions of law.

12.2 Substitution

(a) Subject to applicable laws, the Issuer may, without the authority, assent or approval of Holders (but subject to the prior written consent of the Guarantor), substitute all (but not some only) of the Notes for other securities issued directly or indirectly by the Issuer, provided that such securities:

  (i) have terms not materially less favorable to Holders than the terms of the Notes (as reasonably determined by the Issuer);

  (ii) have a rating ascribed to them by Moody's Investor Service;

  (iii) are guaranteed by the Guarantor to the same extent that the Notes are guaranteed pursuant to the Guarantee; and

  (iv) are listed on the SGX-ST or another internationally recognized stock exchange selected by the Issuer.

(b) The Fiscal Agent shall (at the expense of the Issuer and following receipt by the Fiscal Agent of a certificate signed by an authorized signatory of the Issuer confirming (a)(i) to (iii) above) use reasonable efforts to assist the Issuer in such substitution of the Notes (including, but not limited to, entering into such documents or deeds as may be necessary to give effect thereto), provided that the Fiscal Agent shall not be obliged to participate in, or assist with, any such substitution if the substitution, or the Notes into which the Notes are to be substituted, or if the assistance with such substitution, would impose, in the Fiscal Agent's opinion, more onerous obligations upon it, expose it to liabilities or reduce its protections.

(c) The Fiscal Agent may, without the consent of the Holders (but subject to the prior written consent of the Guarantor), agree with the Issuer to the substitution in place of the Issuer (or of any previous substitute under this Condition 12.2(c)) as the principal debtor under the Notes, subject to compliance with certain other conditions set out in the Fiscal Agency Agreement.

12.3 Meetings

(a) The Fiscal Agency Agreement contains provisions for convening meetings of the Holders to consider any matter relating to the Notes and/or the Fiscal Agency Agreement, including the modification or abrogation of any of these Conditions or any of the provisions of the Fiscal Agency Agreement, upon either the written consent of the Holders of not less than a majority in Principal Amount of the outstanding Notes or the approval of persons entitled to vote not less than a majority of the Principal Amount of such Notes represented and voting at a meeting of the Holders duly called. The quorum at such meeting shall be one or more persons entitled to vote a majority in Principal Amount of the outstanding Notes or, at an adjourned meeting, one or more persons entitled to vote 25% in Principal Amount of the outstanding Notes.

(b) Notwithstanding Condition 12.3(a), for the purposes of passing a resolution at a meeting the business of which includes a Special Matter, no amendment, modification or abrogation shall be made to the

Notes (including these Conditions) or the Fiscal Agency Agreement without the approval or written consent of the Holders of not less than 90% in Principal Amount of the then outstanding Notes or the approval of persons entitled to vote not less than 75% of the Principal Amount of such Notes represented and voting at a meeting of the Holders duly called, and where at such meeting a special quorum shall be required comprising one or more persons entitled to vote two-thirds in Principal Amount of the then outstanding Notes or, at an adjourned meeting, one or more persons entitled to vote one-third in Principal Amount of the then outstanding Notes.

(c) On a poll, each Holder of a Note present in person or by proxy and entitled to vote shall have one vote in respect of each US$1,000 in Principal Amount of such Holder's Notes.

(d) The Issuer, the Guarantor and the Fiscal Agent may, at any time and from time to time, without the consent of any Holders, amend or supplement the Fiscal Agency Agreement or these Conditions: (i) to evidence the succession of another person to the Issuer or the Guarantor and the assumption by any such successor of the covenants of the Issuer or the Guarantor, as applicable, in the Fiscal Agency Agreement and the Notes; (ii) to add to the covenants of the Issuer or the Guarantor for the benefit of the Holders or to surrender any right or power conferred on the Issuer or the Guarantor; (iii) to provide for the issuance of additional Notes in accordance with the limitations set forth in these Conditions and the Fiscal Agency Agreement; (iv) to cure any ambiguity or to correct or supplement any provision in the Fiscal Agency Agreement or these Conditions, which may be inconsistent with any other provision therein, or to make any other provisions with respect to matters or questions arising under the Fiscal Agency Agreement that are not inconsistent with the provisions of the Fiscal Agency Agreement; provided that such action shall not adversely affect the interests of the Holders in any material respect; or (v) to make any other modifications to the Notes or the Fiscal Agency Agreement of a formal, minor or technical nature or necessary in the reasonable opinion of the Fiscal Agent to correct a manifest error or, in reliance on an opinion of counsel delivered to the Fiscal Agent, to comply with mandatory provisions of the laws of Korea so long as such modification does not adversely affect the rights of any Holder in any material respect.

12.4 **Waiver, authorization and determination**

The Fiscal Agent may agree, without the consent of the Holders, to the waiver or authorization of any breach or proposed breach of any of these Conditions or any of the provisions of the Fiscal Agency Agreement.

12.5 **Notification to the Holders**

Any modification, abrogation, waiver, determination, authorization or substitution pursuant to or described in this Condition 12 shall be (i) binding on the Holders, whether or not they are present at any meeting and whether or not they voted, and (ii) notified by the Issuer to the Holders as soon as practicable thereafter in accordance with Condition 13.

12.6 **Compliance with stock exchange rules**

In connection with any amendment, modification, alteration, addition or substitution under this Condition 12, the Issuer will comply with the rules of any stock exchange on which the Notes are for the time being listed or admitted to trading.

13. NOTICES

All notices regarding the Notes shall be valid if sent by post to the Holders at their respective addresses in the Register (which, in the case of a Global Certificate, is expected to consist solely of the common depositary of

Euroclear or Clearstream or its nominee, or any successor thereto) and, if and for so long as the Notes are listed on the SGX-ST and the rules of that exchange so require, published in a newspaper of general circulation in Singapore and/or (where applicable) on the SGX-ST's website. The Issuer shall also ensure that notices are duly given or published in a manner which complies with the rules and regulations of any stock exchange or other relevant authority on which the Notes are for the time being listed. Any notice shall be deemed to have been given on the second day after being so mailed or on the date of publication or, if so published more than once or on different dates, on the date of the first publication.

So long as the Notes are represented by the Global Certificate and the Global Certificate is held on behalf of Euroclear or Clearstream or an alternative clearing system appointed in accordance with the terms of the Notes and the Fiscal Agency Agreement, notices to Holders may be given by delivery of the relevant notice to the clearing systems in accordance with the applicable rules and procedures of the clearing systems for communication by them to entitled accountholders. Any such notice shall be deemed validly given on the day after it has been delivered to Euroclear, Clearstream or an alternative clearing system as aforesaid.

The Issuer shall provide the Guarantor with a copy of each notice it is required to provide to the Holders or an Agent.

14. AGENTS

Under the terms of the Fiscal Agency Agreement, the Issuer has the right to terminate the appointment of any Agent and appoint a successor provided that there shall at all times be:

(a) at least one paying agent, provided that so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that a Global Certificate is exchanged for Definitive Certificates, and unless the Issuer obtains an exemption from the SGX-ST, the Issuer will appoint and maintain a paying agent in Singapore where the Definitive Certificates may be presented or surrendered for payment or redemption. In addition, in the event that a Global Certificate is exchanged for Definitive Certificates, announcement of such exchange shall be made by or on behalf of the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the Definitive Certificates, including details of the paying agent in Singapore;

(b) a fiscal agent;

(c) a registrar; and

(d) a transfer agent.

15. GOVERNING LAW AND SUBMISSION TO JURISDICTION

15.1 Governing law

The Notes and the Guarantee are governed by, and will be construed in accordance with, the laws of the State of New York.

15.2 Jurisdiction

In relation to any suit, legal action or proceedings arising out of or in connection with the Notes, each of the Issuer and the Guarantor will irrevocably submit to the jurisdiction of the New York State and United States Federal courts sitting in the Borough of Manhattan, New York City.

15.3 Appointment of process agent

The Issuer has irrevocably and unconditionally appointed Korean Air Lines Co., Ltd., New York Office at 10 East 53rd Street, Suite 600, New York, NY 10022, United States as its agent for service of process in respect of any suit, legal action or proceedings arising out of or in connection with the Notes and has undertaken that in the event of such agent ceasing so to act it will appoint another person as its agent for that purpose.

The Guarantor has irrevocably and unconditionally appointed The Korea Development Bank, New York Branch at its registered office for the time being at 320 Park Ave., 32nd Floor, New York NY 10022, United States as its agent for service of process in respect of any suit, legal action or proceedings arising out of or in connection with the Notes and has undertaken that in the event of such agent ceasing so to act it will appoint another person as its agent for that purpose.

15.4 **Waiver of Immunity**

To the extent that the Issuer or the Guarantor has or hereafter may acquire any immunity (sovereign or otherwise) from jurisdiction of any court or from any legal process (whether through service of notice, attachment prior to judgment, attachment in aid of execution, execution, set-off or otherwise) with respect to themselves or their respective property and assets or the Notes (in the case of the Issuer) or the Guarantee (in the case of the Guarantor), the Issuer and the Guarantor hereby irrevocably and unconditionally waive, and agree not to plead or claim, any such immunity, and consent to the relief or enforcement, in respect of its respective obligations under the Notes (in the case of the Issuer) or the Guarantee (in the case of the Guarantor) to the fullest extent permitted by applicable law.

16. DEFINITIONS

Unless the context otherwise requires, the following terms will have the following meanings in these Conditions:

"**Additional Amounts**" has the meaning specified in Condition 8.1.

"**Agent**" has the meaning specified in the preamble to these 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 the city in which the Paying Agent has its registered office from time to time; and (b) a day on which banks are open for business in New York, Hong Kong, London and Seoul.

"**Calculation Amount**" means US$1,000 in Principal Amount of Notes.

"**Conditions**" means these terms and conditions of the Notes.

"**Definitive Certificate**" has the meaning specified in Condition 1.1.

"**Denominated Currency**" has the meaning specified in Condition 3.2.

"**Encumbrance**" has the meaning specified in Condition 3.2.

"**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.

"**Fiscal Agency Agreement**" has the meaning specified in the preamble to these Conditions.

"**Fiscal Agent**" has the meaning specified in the preamble to these Conditions.

"**Global Certificate**" has the meaning specified in Condition 1.1.

“Guarantee” has the meaning specified in Condition 4.

“**Guarantor**” means The Korea Development Bank.

“**Holder**” has the meaning specified in Condition 1.2.

“**Indebtedness**” means any obligation (whether present or future, actual or contingent) for the payment or repayment of money which has been borrowed or raised (including money raised by way of acceptances or leasing).

“**Interest Amount**” means the amount payable per Calculation Amount on an Interest Payment Date.

“**Interest Payment Date**” has the meaning specified in Condition 5.1.

“**Interest Period**” has the meaning specified in Condition 5.1.

“**Issue Date**” means September 4, 2019.

“**Issue Price**” in relation to a Note, has the meaning specified in the prospectus or other issuance documentation in respect of that Note.

“**Issuer**” means Korean Air Lines Co., Ltd.

“**Korea**” means The Republic of Korea.

“**Loan Asset**” has the meaning specified in Condition 3.2.

“**Paying Agent**” has the meaning specified in the preamble to these Conditions.

“**Payment Business Day**” has the meaning specified in Condition 7.4.

“**Principal Amount**” has the meaning specified in Condition 1.1.

“**Reciprocal Loan**” has the meaning specified in Condition 3.2.

“**Record Date**” has the meaning specified on the face of the applicable Global Certificate or Definitive Certificate.

“**Register**” has the meaning specified in Condition 1.1.

“**registered account**” has the meaning specified in Condition 7.1.

“**registered address**” has the meaning specified in Condition 7.1.

“**Registrar**” has the meaning specified in the preamble to these Conditions.

“**Relevant Date**” means the date on which the relevant payment first becomes due but, if the full amount of the money payable has not been received by the relevant Agent on or before the due date, it means the date on which, the full amount of the money having been so received, notice to that effect has been duly given to the Holders by the Issuer.

"**Relevant Jurisdiction**" means the Republic of Korea or any political subdivision or any authority thereof or therein having power to tax the Issuer or, in the event of any substitution, Solvent Reorganization or other corporate action resulting in the Issuer being tax resident in any other jurisdiction, that other jurisdiction or any political subdivision or any authority thereof or therein having power to tax the Issuer.

"**Relevant Taxes**" has the meaning specified in Condition 8.1.

"**Secured Counterparty**" has the meaning specified in Condition 3.2.

"**SGX-ST**" means the Singapore Exchange Securities Trading Limited.

"**Significant Subsidiary**" means any Subsidiary or any group of Subsidiaries that, taken together, (i) whose total assets or gross revenues (or, where the Subsidiary in question itself has Subsidiaries, whose total consolidated assets or gross consolidated revenues, as the case may be) attributable to the Issuer represent not less than 20% of the total consolidated assets or the gross consolidated revenues of the Issuer, all as calculated by reference to the then latest audited accounts of such Subsidiary and of any other entity which is a Subsidiary of that Subsidiary and which would, if the latter Subsidiary produced consolidated accounts, be included in such consolidated accounts and the then latest consolidated accounts of the Issuer; or (ii) to which all or substantially all the assets and undertakings of a Subsidiary, which immediately prior to such transfer is a Significant Subsidiary, are transferred.

"**Solvent Reorganization**" means, with respect to the Issuer, solvent Winding-Up, deregistration, dissolution, scheme of arrangement or other reorganization of the Issuer solely for the purposes of a consolidation, amalgamation, merger or reconstruction under which the continuing or resulting corporation effectively assumes the obligations of the Issuer under the Notes and the Fiscal Agency Agreement.

"**Special Matter**" means each of the following matters:

(i) reduction or cancellation of the amount payable or, where applicable, modification, except where such modification is in the opinion of the Fiscal Agent bound to result in an increase of any principal or interest in respect of the Notes;

(ii) modification of the date of payment in respect of any principal or interest in respect of the Notes;

(iii) alteration of the currency in which payments under the Notes are to be made;

(iv) modification or waiver of the provisions regarding the negative pledge of the Guarantor referred to in Condition 3.2 (Negative Pledge);

(v) alteration of the obligations of the Issuer under Conditions 6 (Redemption), 8 (Taxation and Gross-up) or 11 (Events of Default);

(vi) the terms of any consolidation, amalgamation, merger or reorganization of the Issuer or the Guarantor;

(vii) reduction of any of the percentage voting and quorum provisions in Condition 12.3 (Meetings); or

(viii) modification of any of the above matters constituting the Special Matters.

"**Subsidiary**" means any corporation or other business entity of which one person owns or controls (in either case, either directly or through another Subsidiary or other Subsidiaries) 50% or more of the issued share capital or other ownership interest having ordinary voting power to elect directors, managers or trustees of such corporation or other business entity (other than capital stock or other ownership interest of any other class or classes which has voting power only upon the occurrence of any contingency).

"**Transfer Agent**" has the meaning specified in the preamble to these Conditions.

"**Winding-Up**" means, with respect to the Issuer or the Guarantor, a final and effective order or resolution for the bankruptcy (as set forth in Part 3 of the Debtor Rehabilitation and Bankruptcy Act of Korea), winding up, liquidation or any other proceedings in respect of the Issuer or the Guarantor, as the case may be, which commences with a view to liquidation of the Issuer or the Guarantor, as the case may be.

THE GLOBAL CERTIFICATE

The Global Certificate contains provisions that apply to the Notes in respect of which it is issued, some of which modify the effect of the Conditions of the Notes set out in this Offering Circular. The following is a summary of provisions of the Notes while in global form.

Meetings

The registered holders of the Notes in respect of which the Global Certificate is issued will be treated as being one person for the purposes of any meeting of Holders, and at any such meeting, as having one vote in respect of each US$1,000 in principal amount of the Notes in respect of which the Global Certificate is issued.

Cancelation

Cancelation of any Notes following its redemption or purchase by the Issuer will be effected by a reduction in the principal amount of the Notes in the register of Holders.

Transfers

Transfers of interests in the Notes will be effected through the records of Euroclear and Clearstream, and their respective participants in accordance with their respective rules and operating procedures.

Notices

So long as the Notes are represented by the Global Certificate and the Global Certificate is held on behalf of Euroclear, Clearstream or an alternative clearing system appointed in accordance with the terms of the Notes and the Fiscal Agency Agreement, notices to the Holders may be given by delivery of the relevant notice to the clearing systems in accordance with the applicable rules and procedures of the clearing systems for communication by them to entitled accountholders. Any such notice shall be deemed validly given on the day after it has been delivered to Euroclear, Clearstream or an alternative clearing system.

Singapore Paying Agent

For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that the Global Certificate is exchanged for Definitive Certificates, and unless the Issuer obtains an exemption from the SGX-ST, the Issuer will appoint and maintain a paying agent in Singapore, where the Definitive Certificates may be presented or surrendered for payment or redemption. In addition, in the event that the Global Certificate is exchanged for Definitive Certificates, an announcement of such exchange will be made by or on behalf of the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the Definitive Certificates, including details of the paying agent in Singapore.

USE OF PROCEEDS

The net proceeds to the Issuer from this offering (after deducting underwriting commissions but not other estimated expenses relating to the offering) are expected to be US$297,423,000. The Issuer intends to use such net proceeds for general corporate purposes, including repayment of existing debt.

THE ISSUER

Overview

The Issuer is the leading airline in Korea in terms of total passengers and cargo carried according to data for the first half of 2019 released by the Korea Airport Corporation and the Incheon Airport Corporation. The Issuer is the largest member company, in terms of assets, of the Hanjin Group, a Korean conglomerate with strengths in the airline and transportation industries. The Issuer engages primarily in air transportation for passengers and cargo through the operation of both international and domestic flights, providing commercial airline services to destinations in Korea and around the world from its hub at Incheon International Airport, one of the major air gateways in Asia. As of June 30, 2019, the Issuer provided services to 113 international destinations in 43 countries and 13 domestic destinations in connection with its passenger and cargo services businesses. The Issuer also operates related businesses in aerospace, catering and in-flight sales and limousine transportation and hotels. As of June 30, 2019, the Issuer had approximately 21,200 employees, 44.8% of whom were flight and cabin crew, 24.5% of whom were engineers and 30.7% of whom were administrative personnel. The Issuer is one of the founding members of the SkyTeam alliance, a global passenger alliance with 19 member airlines.

The Issuer's headquarters and registered office are located at 260 Haneul-gil (Gonghang-dong), Gangseo-gu, Seoul, Korea 07505. The Issuer's website is http://www.koreanair.com. The information on the Issuer's website does not constitute a part of this Offering Circular.

History

The Issuer was originally incorporated in 1962 as the state airline of Korea. The Issuer was subsequently listed on the Korea Exchange through an initial public offering in 1966 and was acquired by the Hanjin Group in 1969. The Issuer began transpacific cargo services in 1971 and transpacific passenger services in 1972. It introduced the Boeing 707 into service in 1971, the Boeing 747 in 1974, the Airbus 300 in 1975, the Airbus 380 in 2011 and the Boeing 747-8I in 2015. In 2000, global oversupply and intensifying competition in the airline industry led the Issuer to form the global airline alliance SkyTeam along with Aeroméxico, Air France and Delta Air Lines. In August 2013, a new holding company, Hanjin KAL, was established within the Hanjin Group, and the Issuer transferred its investment business, including all of its equity interest in its low-cost carrier subsidiary Jin Air, to Hanjin KAL. As of June 30, 2019, Hanjin KAL was the largest shareholder of the Issuer and owned 29.96% of the Issuer's outstanding common shares and 0.86% of the Issuer's preferred shares.

Recent Developments

On August 14, 2019, the Issuer publicly disclosed its Korean-language consolidated financial statements as of and for the six months ended June 30, 2019. The Issuer's revenue for the six months ended June 30, 2019 increased as compared to the corresponding period in 2018, primarily due to stable demand in the Issuer's passenger services business. However, its operating income decreased and its loss for the period increased as compared to the corresponding period in 2018, mainly due to the depreciation of the Won against the U.S. dollar during the first half of 2019 and escalating trade tensions between the United States and China, which had a negative impact on the Issuer's cargo services business.

Services

The Issuer's primary business segment is air transport, consisting of the passenger services business and cargo services business, which together have accounted for a significant majority of its total revenues in recent years. The Issuer also operates in the areas of aerospace, catering of in-flight meals and in-flight sales and limousine transportation and hotel operations.

Air Transport

Passenger Services Business

The Issuer maintains a global network for its passenger services. As of June 30, 2019, the Issuer operated passenger flights connecting 113 destinations (13 domestic and 100 international) in 38 countries. The Issuer focuses on managing strategic routes to optimize flight schedules, taking into account the flow of demand, the Issuer's presence in the market and available resources, as well as on expanding its network through analyzing new consumer demand and developing potential new markets. Recently, the Issuer has concentrated on building a base for long-term growth by introducing next-generation passenger aircraft such as the B777-300ER, B787-9 and A220-300 and entering into new markets with the launch of new routes such as Incheon-Zagreb, Busan-Da Nang and Incheon-Boston.

Cargo Services Business

The Issuer's cargo services extended to 44 cities in 26 countries as of June 30, 2019. In addition to providing cargo services on dedicated "all-cargo" flights, the Issuer also transports cargo on its passenger flights using the lower deck of its passenger aircraft. The Issuer's cargo business is important to the Issuer as it provides a stable revenue stream. The Issuer endeavors to create new demand by developing new markets for its cargo services. The Issuer has also developed customized sales channels for specialty cargo, including medical supplies, fresh products (such as fruit from the United States and seafood from Canada and Europe), electronic equipment and electric car batteries, to improve profitability. In addition, the Issuer conducts corporate sales and seeks to secure base demand through cooperation with global freight forwarders. The Issuer utilizes dedicated cargo terminals at key airports including Incheon, Tokyo, Osaka, New York and Los Angeles.

Fleet

As of June 30, 2019, the Issuer operated a fleet of 169 aircraft, including 146 passenger aircraft and 23 cargo aircraft. The Issuer's passenger fleet consisted of 44 B777-200ER/300ER/300 aircraft, 31 B737-800/900ER/900 aircraft, 29 A330-200/300 aircraft, 10 B747-8i aircraft, 10 A380-800 aircraft, 10 B787-9 aircraft, 10 A220-300 aircraft and 2 B747-400 aircraft, while its cargo fleet comprised 12 B777-F aircraft,7 B747-8F and 4 B747-400ERF aircraft. The Issuer plans to continue to modernize its fleet with a view toward future growth by phasing out older aircraft and building a core fleet with fuel-efficient and environmentally friendly aircraft.

Hub and Airport Operations

The Issuer's main hub is Incheon International Airport where, commencing in January 2018, the Issuer has been providing its passenger services from Terminal 2, a new passenger terminal completed in late 2017. The Issuer also operates a substantial portion of its domestic flights out of Gimpo Airport, the second largest airport in Korea after Incheon International Airport. At these airports, the Issuer provides most of the operational services it requires for the handling of passengers and cargo. At other Korean airports and at overseas airports, the Issuer subcontracts the provision of most of its ground handling requirements. Runway, ramp and terminal facilities are provided by airport operators that charge airlines for the use of these facilities, principally through landing, parking and passenger charges. Navigation services are provided to the aircraft by countries through whose airspace they fly or by international bodies such as Eurocontrol. Navigation charges are generally based on distance flown and weight of aircraft.

Other Businesses

The Issuer also operates related businesses in aerospace, catering and in-flight sales and limousine transportation and hotels. The Issuer's aerospace business includes the design and manufacture of airplanes and aircraft parts, maintenance services for commercial and military aircraft and research and development of unmanned aerial vehicles and satellites, and is based on its experience and expertise accumulated over the past four decades. The

Issuer operates a research and development center located in Daejeon, Korea that focuses on next-generation aerospace technology. The Issuer also operates a catering business to augment its passenger services business and provides in-flight sales of duty-free products for passengers on international flights. In addition, the Issuer provides ground transportation services linking Gimpo Airport and Incheon International Airport and major hotels in downtown Seoul, through its limousine bus business operated by Air Total Service Co., Ltd., a wholly-owned subsidiary. Through Hanjin International Corporation, a U.S. subsidiary, the Issuer operates the Intercontinental Los Angeles Downtown Hotel and the Wilshire Grand Center in the United States.

Government Regulation and Support

The Korean civil aviation industry is subject to a high degree of regulation by the Ministry of Land, Infrastructure and Transport (the "**MOLIT**") and is governed by the Aviation Law of Korea. The aviation industry is also subject to the Convention on International Civil Aviation. Regulations issued or implemented by the MOLIT encompass nearly all aspects of airline operations, including the approval of the establishment of airlines, domestic and international route allocations, licensing of pilots, operational safety standards, aircraft acquisitions, aircraft airworthiness certification, aircraft registration standards, aircraft maintenance, air traffic control and standards for airport operations.

The MOLIT strives to maintain a foundation for safe and convenient air travel while enhancing Korea's aviation industry. The MOLIT negotiates bilateral or multilateral air services agreements with other countries, including agreements governing the number of airlines and details of traffic rights such as routes and frequencies. A bilateral air services agreement is an agreement to liberalize aviation services between two contracting states and allows the airlines of both contracting states to launch commercial flights and to use international airports of the other, among others. Once negotiated, the traffic rights are allocated to airlines in Korea based on factors such as the airlines' applications and preferences, thorough scrutiny of the airlines' competitiveness and contribution to the market development of the route, and the balance of allocations among airlines. As of June 30, 2019, Korea had air services agreements with 100 countries, as well as "open skies" agreements with 33 countries for passenger routes and 42 countries for cargo routes. "Open skies" agreements allow airlines on either side of the agreement to use all international airports of the other, to form strategic alliances, to lease airplanes or crew and share international routes with other airlines. The MOLIT plans to conclude strategic air services liberalization agreements with major countries including China and Japan while continuing to seek route expansion to support the business of Korean carriers, including the Issuer.

Flight Safety

Safety is the Issuer's top priority. The Issuer completed its nineteenth consecutive fatal-accident-free and zero hull loss year of operation in 2018. The Issuer runs a series of pilot training programs to ensure that its pilots and co-pilots continue to be qualified and dependable. In addition to in-house service training, the Issuer's cabin crew undergoes safety training programs approved by the MOLIT and carried out at its cabin crew training center. The Issuer's safety culture is enhanced through safety policy updates, enhancement of safety reporting and encouragement of employees' participation in safety education activities, as well as close cooperation with governmental agencies such as the Office of Civil Aviation, the Federal Aviation Administration, the European Aviation Safety Agency and the Department of Defense.

Maintenance

In line with the paramount importance it places on flight safety, the Issuer is focused on first-rate aircraft maintenance. The Issuer's Maintenance & Engineering Division is dedicated to the maintenance of civil aircraft and engines and performs line and heavy maintenance for all types of aircraft operated by the Issuer at its aircraft maintenance bases located at Gimpo Airport, Incheon International Airport and Gimhae Airport. Engine overhaul maintenance is performed for most engine types operated by the Issuer at its engine maintenance center in Bucheon near the Gimpo Airport maintenance base. The Issuer has been recognized for its operational performance through awards from Airbus and Boeing, among others.

SkyTeam and Other Alliances

In order to enhance its competitive position, the Issuer founded a global alliance of passenger airlines, the SkyTeam alliance, with Delta Air Lines, Air France and Aeroméxico in 2000. The member airlines in the SkyTeam alliance aim to develop a shared system for managing revenue and expenses, cooperate on frequent flyer schemes, and share airport facilities and lounges, resources and information technology to provide seamless service around the world. As of June 30, 2019, the SkyTeam alliance had 19 members and was the world's second largest airline alliance in terms of number of passengers and number of member airlines, collectively serving more than 1,150 destinations in over 175 countries with approximately 14,500 daily flights and approximately 630 million annual passengers.

In 2000, the Issuer also formed the world's first global cargo alliance, SkyTeam Cargo, which remains the only air cargo alliance in the world and collectively operates more than 14,500 daily flights to more than 175 countries. SkyTeam Cargo's vision is to become a competitive logistics provider offering global network access, standardized products and one-stop and seamless service across carriers. Similar to the SkyTeam alliance, SkyTeam Cargo seeks to explore synergy benefits from utilizing each member's worldwide network and cost savings by selecting a single ground handling company, which lowers ground handling fees. As of June 30, 2019, SkyTeam Cargo had 12 members.

In addition, the Issuer has developed partnerships beyond the SkyTeam alliance through bilateral code-sharing agreements. Code-sharing is an operation under which an airline's flights can be marketed by a non-operating (code-sharing) airline, thereby allowing two or more carriers to sell seats on one aircraft. Code-sharing allows the non-operating airline to offer convenient, seamless flight services to its customers by expanding the number of destinations covered through the use of other airlines' flights. As of June 30, 2019, the Issuer had bilateral code-sharing agreements for passenger flights with 35 airlines, including 16 members of the SkyTeam alliance and 19 airlines outside of the SkyTeam alliance.

Joint Venture with Delta Air Lines

In June 2017, the Issuer and Delta Air Lines signed a joint venture agreement allowing the carriers to market and sell each other's seats and share costs, resources and revenues for flights within the scope of the joint venture. The joint venture was approved by the U.S. Department of Transportation and the MOLIT in November 2017 and March 2018, respectively, and was officially launched on May 1, 2018. Through the joint venture, the Issuer and Delta Air Lines expect to continue to increase sales and improve operational efficiency by sharing their sales networks, engaging in joint marketing efforts and gaining greater access to premium corporate passengers within each other's customer base.

Competition

The Issuer is the largest provider of airline passenger services in Korea in terms of number of passengers. The Issuer competes in the airline passenger services market based on a variety of factors, including fare pricing, customer service, safety record and reputation, on-time performance, routes served, flight schedules, types of aircraft, code-sharing relationships, in-flight entertainment systems, frequent flyer programs, effectiveness of marketing, promotional activity and the ability to identify and satisfy consumer preferences. Recently, competition in international markets has intensified due to aggressive marketing, either by foreign carriers independently or through airline alliances formed by domestic and foreign carriers. The Issuer also faces competition from ground transportation alternatives. The Issuer believes its main competitors are other Korean carriers and high-speed trains in the domestic market and major flag carriers in the international markets.

The Issuer is currently a top-five air cargo carrier in terms of scheduled international freight ton-kilometers, according to the International Air Transport Association. The Issuer believes its main airline competitors in the cargo services business are Emirates Airlines and Cathay Pacific Airlines.

Legal Proceedings

The Issuer may from time to time become a party to various legal or administrative proceedings arising in the ordinary course of its business. As of the date of this Offering Circular, the Issuer is not involved in any litigation or other legal proceedings, the outcome of which would, in the reasonable judgment of its management, have a material adverse effect on the financial condition or results of operations of the Issuer.

THE GUARANTOR

Overview

The Bank was established in 1954 as a government-owned financial institution pursuant to 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, Korea.

In May 2009, the KDB Act was amended to facilitate the Bank's privatization, reflecting the Government's intention to nurture a more competitive corporate and investment banking sector and trigger reorganization and further advancement of the Korean financial industry. To implement the Bank's privatization, the Government established KDB Financial Group, or KDBFG, a financial holding company, and Korea Finance Corporation, or KoFC, a public policy financing vehicle, in October 2009, by spinning off a portion of the Bank's assets, liabilities and equity. The Government transferred its ownership interest in the Bank to KDBFG in exchange for all of KDBFG's share capital in November 2009.

In August 2013, in light of continued uncertainties surrounding the global economy and the prolonged effects of the global financial crisis that commenced in the second half of 2008 on the Korean economy, as well as certain overlap of financial policy roles among different Government-owned banks and financial corporations, the Financial Services Commission announced the Government's plan to reorganize Government-owned policy banks and financial corporations in order to streamline their overlapping functions and reinforce their policy financing roles for start-ups and small- and medium-sized enterprises, new growth industries and overseas projects. The plan called for, among other things, (i) the merger of KoFC and KDBFG into the Bank and the transfer of KoFC's overseas assets of approximately ₩2 trillion to The Export-Import Bank of Korea, or KEXIM, (ii) the sale of the Bank's subsidiaries that do not have policy financing roles and (iii) the gradual reduction of the Bank's retail banking services.

In May 2014, the National Assembly amended the KDB Act to largely reflect the plan announced by the Financial Services Commission and halt the Bank's privatization and 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. Under the amended KDB Act, which was amended in May 2014, the public policy financing role was consolidated and strengthened, and KDBFG and KoFC (together with its subsidiaries) were merged into the Bank on December 31, 2014 in order to utilize the Bank's rich experience and expertise in public policy financing, and the Bank took over KoFC's role of providing public policy financial support to Korean companies, including managing and operating the Financial Market Stabilization Fund established pursuant to the Act on the Structural Improvement of the Financial Industry enacted in 2009, while KoFC's overseas assets of approximately ₩2 trillion were transferred to KEXIM. On December 31, 2014, the Government transferred all of its ownership interest in KoFC and KDBFG to the Bank and in return received 3,036,079,768 new shares of the Bank with an aggregate par value of ₩15,180.4 billion, which represented all of the Bank's share capital. As a newly merged entity, the Bank has an authorized share capital of up to ₩30,000 billion and its paid-in capital was ₩15,180.4 billion. While the Government has halted its plan for the Bank's privatization, it has expressed its intention to privatize the Bank's subsidiaries that do not have policy financing roles, subject to market conditions.

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 December 31, 2018, the Bank had ₩137,775.6 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 possible loan losses, present value discounts and deferred loan fees), total assets of ₩209,774.8 billion and total equity of ₩24,985.2 billion, as compared to ₩140,005.2 billion of loans outstanding, ₩213,179.0 billion of total assets and ₩22,616.1 billion of total equity as of December 31, 2017. In 2018, the Bank recorded interest income of ₩5,145.9 billion, interest expense of ₩3,763.1 billion and net income of ₩2,509.8 billion, as compared to ₩4,873.3 billion of interest income, ₩3,386.9 billion of interest expense and ₩434.8 billion of net income in 2017. 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 chairman of 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 Offering Circular, 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) forty percent 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 capitalized 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 privatization. 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 privatization and to consolidate and strengthen the Bank’s public financing role, utilizing 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 KDBFG (subject to the National Assembly’s authorization 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 the Bank’s shares; and
- the establishment of KDBFG and 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 privatization;
- 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.

Capitalization

As of December 31, 2018, the Bank's authorized capital was ₩30,000 billion and capitalization was as follows:

	December 31, 2018[1]
	(billions of won)
Long-term debt:	
Won currency borrowings	₩ 3,874.5
Industrial finance bonds	118,869.2
Foreign currency borrowings	4,312.8
Total long-term debt	127,056.5[2][3]
Capital:	
Paid-in capital	18,108.1
Capital surplus	2,497.2
Retained earnings[4]	4,412.6
Accumulated other comprehensive income	(32.7)
Total capital	24,985.2
Total capitalization	₩152,041.7

(1) Except as disclosed in this Offering Circular, there has been no material adverse change in the Bank's capitalization since December 31, 2018.

(2) The Bank has translated borrowings in foreign currencies into Won at the rate of ₩1,118.10 to US$1.00, which was the market average exchange rate, as announced by the Seoul Monetary Brokerage Services Ltd., on December 31, 2018.

(3) As of December 31, 2018, the Bank had contingent liabilities totaling ₩7,847.8 billion under outstanding guarantees issued on behalf of its clients.

(4) Includes regulatory reserve for credit losses of ₩1,372.0 billion as of December 31, 2018. If the Bank's provision 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.

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, stabilization 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 maximize 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 the Financial Market Stabilization Fund and provide financial assistance; 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. On February 20, 2000, the Government contributed ₩100 billion in cash to the Bank's capital. On December 29, 2000, the Bank reduced its paid-in capital by ₩959.8 billion to offset its expected net loss for the year. To compensate for the resulting deficit under the KDB Act, on June 20, 2001, the Government contributed ₩3 trillion in the form of shares of common stock of Korea Electric Power Corporation, or KEPCO, to the Bank's capital. On December 29, 2001, the Government contributed ₩50 billion in cash to the Bank's capital. On August 13, 2003, the Government contributed ₩80 billion in cash to the Bank's capital to support the Bank's existing fund for facilitating the Republic's regional economies. On April 30, 2004, the Government contributed ₩1 trillion in the form of shares of common stock of KEPCO and Korea Water Resources Corporation to the Bank's capital to support the Bank's lending to small-and medium-sized companies and to compensate for its contribution to LG Card Ltd. in the form of loans, cash injections and debt-for-equity swaps. On December 19, 2008, the Government contributed ₩500 billion in the form of shares of common stock of Korea Expressway Corporation to the Bank's capital and, in January 2009, the Government contributed ₩900 billion in cash to the Bank's capital, in each case to bolster the Bank's capital base in order to stabilize the Korean financial market by supporting small and medium-sized enterprises and providing increased liquidity to corporations. In October 2009, the Bank's paid-in capital decreased by ₩400.0 billion in connection with the establishment by the Government of KDBFG and KoFC by spinning off a portion of the Bank's assets, liabilities and equity (including paid-in capital). In March 2010, the Government, through KDBFG, made a further capital contribution of ₩10 billion in cash to the Bank's capital. In December 2013, the Government contributed ₩10 billion in cash to the Bank's capital. In December 2014, the Bank's paid-in capital increased by ₩5,918.5 billion in connection with the merger of KDBFG and KoFC into the Bank as described under the heading "Overview." In April, July and September 2015, the Government contributed

₩2 trillion in the form of shares of common stock of Korea Land & Housing Corporation and KEPCO, ₩40 billion in cash and ₩15 billion in cash, respectively, to the Bank's capital to support the Bank's fund for infrastructure projects, new growth engine, high-tech and new renewable energy industries and business enterprises in general. The Government further contributed to the Bank's capital ₩50 billion in cash in July 2016, ₩247.7 billion in cash in September 2016, ₩10 billion in cash in November 2016, ₩250 billion in the form of shares of common stock of Incheon Port Authority and Yeosu Gwangyang Port Authority in May 2017, ₩80 billion in cash in September 2017, ₩65 billion in cash in December 2017 and ₩170 billion in cash in June 2018. Taking into account these capital contributions, reduction and merger, as of December 31, 2018, the Bank's total paid-in capital was ₩18,108.1 billion. See Note 28 of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

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 authorized capital" and that accumulated amounts in reserve may be capitalized. 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 Offering Circular, 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.

In addition, the conditions of the IMF aid package stated that domestic banks in the Republic, including the Bank, should undergo external audits from internationally recognized accounting firms. Accordingly, 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 program 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 reorganization.

Selected Financial Statement Data

Unless specified otherwise, the information provided below is stated on a separate basis in accordance with Korean IFRS.

The Bank's audited financial information as of and for the year ended December 31, 2018 has reflected the application of the new accounting standard, K-IFRS 1109. As permitted by the transition rules of K-IFRS 1109, the Bank's comparative financial information as of and for the year ended December 31, 2017 has not been restated to retroactively apply K-IFRS 1109 and is not directly comparable to the Bank's audited financial information as of and for the year ended December 31, 2018. For additional information regarding the impact of the application of K-IFRS 1109, see Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

Recent Developments

As of March 31, 2019, the Bank had ₩139,571.2 billion of loans outstanding (including 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 possible loan losses, present value discounts and deferred loan fees), total assets of ₩217,567.0 billion and total equity of ₩25,600.3 billion, as compared to ₩137,775.6 billion of loans outstanding, ₩209,774.8 billion of total assets and ₩24,985.2 billion of total equity as of December 31, 2018. For the three months ended March 31, 2019, the Bank recorded interest income of ₩1,279.0 billion, interest expense of ₩1,029.6 billion and net income of ₩200.6 billion, as compared to ₩1,214.4 billion of interest income, ₩889.1 billion of interest expense and ₩477.0 billion of net income for the three months ended March 31, 2018.

The following tables present selected separate financial information as of December 31, 2018 and March 31, 2019 and for the three months ended March 31, 2018 and 2019, which has been derived from the Bank's unaudited separate financial statements as of March 31, 2019 and for the three months ended March 31, 2019 and 2018 prepared in accordance with Korean IFRS.

Separate K-IFRS Financial Statement Data

	Three Months Ended March 31, 2018	Three Months Ended March 31, 2019
	(unaudited) (billions of won)	
Income Statement Data		
Total Interest Income	1,214.4	1,279.0
Total Interest Expenses	889.1	1,029.6
Net Interest Income	325.3	249.4
Operating Income	656.8	399.1
Net Income	477.0	200.6

	As of December 31, 2018	As of March 31, 2019
	(unaudited) (billions of won)	
Statements of Financial Position Data		
Total Loans(1)	137,775.6	139,571.2
Total Borrowings(2)	173,706.1	175,288.1
Total Assets	209,774.8	217,567.0
Total Liabilities	184,789.5	191,966.7
Equity	24,985.2	25,600.3

(1) Gross amount, which includes loans for facility development, loans for working capital, 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 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 December 31, 2017 and 2018, which have been derived from its audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018.

	As of December 31, 2017	As of December 31, 2018(1)
	(billions of won)	
Statements of Financial Position Data		
Total Loans(2)	146,448.9	144,980.2
Total Borrowings(3)	184,847.0	185,668.7
Total Assets	263,811.7	260,076.2
Total Liabilities	230,240.9	225,822.7
Equity	33,570.8	34,253.4

(1) Reflects the application of K-IFRS 1109. The Bank's comparative audited consolidated financial information as of December 31, 2017 has not been restated to retroactively apply K-IFRS 1109 and is not directly comparable to the Bank's audited consolidated financial information as of December 31, 2018.

(2) 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. Classified as "loans measured at amortized cost" and "loans measured at fair value through profit or loss" under K-IFRS 1109.

(3) 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 December 31, 2017 and 2018.

	Year Ended December 31,	
	2017	2018[(1)]
	(billions of Won)	
Income Statement Data		
Total Interest Income	5,753.8	6,112.2
Total Interest Expense	3,499.6	4,031.0
Net Interest Income	2,254.3	2,081.2
Operating Income (Loss)	767.3	2,266.1
Non-operating Income (Loss)	778.4	(1,087.3)
Income (Loss) before Income Tax	1,545.7	1,178.8
Income Tax Expense	982.3	472.8
Net Income (Loss)	563.4	706.0

(1) Reflects the application of K-IFRS 1109. the Bank's comparative audited consolidated financial information for the year ended December 31, 2017 has not been restated to retroactively apply K-IFRS 1109 and is not directly comparable to the Bank's audited consolidated financial information for the year ended December 31, 2018.

Separate Financial Statement Data

The following tables present selected separate financial information as of and for the years ended December 31, 2017 and 2018, which has been derived from the Bank's audited separate financial statements as of and for the years ended December 31, 2017 and 2018 included in this Offering Circular. You should read the following financial statement data together with the financial statements and notes included in this Offering Circular.

	As of December 31,	
	2017	2018[(1)]
	(billions of won)	
Statements of Financial Position Data		
Total Loans[(2)]	140,005.2	137,775.6
Total Borrowings[(3)]	173,432.5	173,706.1
Total Assets	213,179.0	209,774.8
Total Liabilities	190,562.9	184,789.5
Equity	22,616.1	24,985.2

(1) Reflects the application of K-IFRS 1109. The Bank's comparative audited separate financial information as of December 31, 2017 has not been restated to retroactively apply K-IFRS 1109 and is not directly comparable to the Bank's audited separate financial information as of December 31, 2018. For information regarding the impact of the application of K-IFRS 1109, see Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

(2) 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. Classified as "loans measured at amortized cost" and "loans measured at fair value through profit or loss" under K-IFRS 1109.

(3) Total Borrowings include deposits, financial liabilities measured at fair value through profit or loss, borrowings and debentures.

As of December 31, 2018, the Bank's total assets decreased by 1.6% to ₩209,774.8 billion from ₩213,179.0 billion as of December 31, 2017, primarily due to (i) a decrease in the sum of securities measured at fair value through other comprehensive income and securities measured at fair value through profit or loss under K-IFRS 1109 to ₩31,314.9 billion as of December 31, 2018, compared to the sum of available-for-sale financial assets and financial assets held for trading under K-IFRS 1039 of ₩32,989.7 billion as of December 31, 2017, and (ii) a decrease in loans measured at amortized cost under K-IFRS 1109 to ₩134,245.1 billion as of December 31, 2018, compared to loans under K-IFRS 1039 of ₩136,279.3 billion as of December 31, 2017, the effects of which were partially offset by an increase in investments in subsidiaries and associates to ₩25,430.9 billion as of December 31, 2018, from ₩22,749.4 billion as of December 31, 2017.

As of December 31, 2018, the Bank's total liabilities decreased by 3.0% to ₩184,789.5 billion from ₩190,562.9 billion as of December 31, 2017, primarily due to a decrease in accounts payable to ₩1,857.6 billion from ₩4,580.6 billion and a decrease in derivative financial liabilities to ₩3,232.6 billion from ₩5,907.8 billion.

As of December 31, 2018, the Bank's total equity increased by 10.5% to ₩24,985.2 billion from ₩22,616.1 billion as of December 31, 2017, primarily due to an increase in retained earnings to ₩4,412.6 billion from ₩1,743.3 billion, which was due primarily to an increase in net income.

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 December 31, 2017 and 2018 included in this Offering Circular.

	Year Ended December 31,	
	2017	**2018[1]**
	(billions of Won)	
Income Statement Data		
Total Interest Income	4,873.3	5,145.9
Total Interest Expense	3,386.9	3,763.1
Net Interest Income	1,486.4	1,382.8
Operating Income (Loss)	1,474.8	1,511.1
Income (Loss) before Income Tax	682.6	2,890.9
Income Tax Expense (Benefit)	247.8	381.1
Net Income (Loss)	434.8	2,509.8

(1) Reflects the application of K-IFRS 1109. The Bank's comparative audited separate financial information for the year ended December 31, 2017 has not been restated to retroactively apply K-IFRS 1109 and is not directly comparable to the Bank's audited separate financial information for the year ended December 31, 2018. For information regarding the impact of the application of K-IFRS 1109, see Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

2018

The Bank had net income of ₩2,509.8 billion in 2018 compared to net income of ₩434.8 billion in 2017, on a separate basis. The principal factors for the increase in net income included:

- a reversal of impairment loss on investments in subsidiaries and associates of ₩1,341.0 billion in 2018 compared to impairment loss on investments in subsidiaries and associates of ₩773.9 billion in 2017, primarily due to a recognition of reversal of impairment losses based on the Bank's agreement with Hyundai Heavy Industries Co., Ltd. ("Hyundai Heavy Industries") in March 2019 to sell all of the Bank's shares in Daewoo Shipbuilding & Marine Engineering Co., Ltd., or DSME, to Hyundai Heavy Industries;

- a decrease in provision for loan loss allowance to ₩377.4 billion in 2018 from ₩1,212.2 billion in 2017, primarily due to the recognition of a reversal of loan loss allowance in connection with the sale of Kumho Tire Co., Inc. in 2018; and
- net foreign currency transaction gain of ₩127.3 billion in 2018 compared to net foreign currency transaction loss of ₩321.8 billion in 2017, primarily due to the depreciation of the Won against the U.S. dollar during 2018.

The above factors were partially offset by a decrease in net gain on securities measured at fair value through other comprehensive income under K-IFRS 1109 to ₩12.0 billion in 2018, compared to net gain on available-for-sale financial assets under K-IFRS 1039 of ₩885.0 billion in 2017, primarily due to the application of K-IFRS 1109 in 2018. See Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

2017

The Bank had net income of ₩434.8 billion in 2017 compared to net loss of ₩3,641.1 billion in 2016, on a separate basis.

The principal factors for the net income of ₩434.8 billion in 2017 compared to the net loss of ₩3,641.1 billion in 2016 included:

- a decrease in impairment losses on investments in subsidiaries and associates to ₩773.9 billion in 2017 from ₩3,140.9 billion in 2016, primarily due to a decrease in impairment losses on DSME;
- a decrease in provision for loan losses to ₩1,212.2 billion in 2017 from ₩3,249.7 billion in 2016, primarily due to (i) the write-off of a significant amount of the Bank's loans to Hanjin Shipping Co., Ltd. and STX Offshore & Shipbuilding Co., Ltd. in 2017 and (ii) a decrease in the Bank's loans to DSME as a result of a debt-to-equity swap in 2017; and
- an increase in net gain on available-for-sale financial assets to ₩885.0 billion in 2017 from ₩248.2 billion in 2016, primarily due to gains from the sale of the Bank's equity interest in Korea Aerospace Industries, Ltd. in June 2017.

The above factors were partially offset by (i) an income tax expense of ₩247.8 billion in 2017 compared to an income tax benefit of ₩253.0 billion in 2016, primarily due to income before income tax of ₩682.6 billion in 2017 compared to loss before income tax of ₩3,894.1 billion in 2016 and (ii) a decrease in dividend income to ₩850.8 billion in 2017 from ₩1,197.4 billion in 2016, primarily due to decreased dividends from investments in associates (including KEPCO).

Provisions for Possible Loan Losses and Loans in Arrears

The Bank establishes provisions for possible 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 January 1, 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 recognizing 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. See Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

As of December 31, 2018, the Bank established provisions of ₩3,539.1 billion for possible loan losses, 0.7% higher than the provisions as of December 31, 2017 of ₩3,515.5 billion, primarily due to an increase in loans classified as substandard. The provisions for possible loan losses are recorded for those loans for which objective evidence of impairment exists as a result of one or more events that occurred after initial recognition and, if the Bank's provisions for possible loan losses are deemed insufficient for regulatory purposes, the Bank compensates for the difference by recording a regulatory reserve for possible loan losses, which would be deducted from retained earnings. See Notes 3(26), 28(4) and 28(5) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

Certain of the Bank's customers have restructured loans with their creditor banks. As of December 31, 2018, the Bank has provided loans of ₩2,210.4 billion for companies under workout, court receivership, court mediation and other restructuring procedures. In addition, as of such date, the Bank held equity securities of such companies in the amount of ₩43.6 billion following debt-for-equity swaps. As of December 31, 2018, the Bank had established provisions of ₩1,005.9 billion for such loans. The Bank cannot assure you that actual results of the credit loss from the loans to these customers will not exceed the provisions reserved.

The following table provides information on the Bank's loan loss provisions.

		As of December 31, 2017[1]		As of December 31, 2018[1]	
		Loan Amount	**Loan Loss Provisions**	**Loan Amount**	**Loan Loss Provisions**
		(billions of won)			
Loan Classification	Normal[2]	₩130,890.8	₩ 309.3	₩130,199.6	₩ 334.4
	Precautionary	5,258.5	1,118.5	3,520.9	652.3
	Substandard	2,221.7	981.9	2,772.8	1,499.1
	Doubtful	458.8	227.1	250.0	142.8
	Expected Loss	1,175.5	878.6	1,032.3	910.5
	Total	₩140,005.2	₩3,515.5	₩137,775.6	₩3,539.1

(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 provisions for all loans including loans guaranteed by the Government.

As of December 31, 2018, the Bank's non-performing loans totaled ₩4,055.1 billion, representing 2.9% of its outstanding loans as of such date. Non-performing loans are defined as loans that are classified as substandard or below. On December 31, 2018, the Bank's legal reserve was ₩173.9 billion, representing 0.1% 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, STX Offshore & Shipbuilding, Dongbu Steel Co., Ltd., Hanjin Heavy Industries and Construction Co., Ltd., Hyundai Merchant Marine Co., Ltd., Daehan Shipbuilding Co., Ltd., Hanjin Shipping Co., Ltd. and STX Heavy Industries Co., Ltd. As of December 31, 2018, the Bank's credit extended to these companies totaled ₩10,719.2 billion, accounting for 5.1% of the Bank's total assets as of such date.

As of December 31, 2018, the Bank's exposure (including loans classified as substandard or below and equity investment classified as estimated loss or below) to DSME decreased to ₩4,263.2 billion from ₩4,712.8 billion as of December 31, 2017, primarily due to a decrease in guarantees. As of December 31, 2018, the Bank's exposure to STX Offshore & Shipbuilding was ₩1,029.9 billion, a decrease from ₩1,079.8 billion as of December 31, 2017, primarily due to a decrease in guarantees and the repayment of certain existing loans. As of December 31, 2018, the Bank's exposure to Dongbu Steel decreased to ₩1,189.9 billion from ₩1,212.1 billion as of December 31, 2017, primarily due to a debt-to-equity swap and an increase in the impairment of shares of common stock of Dongbu Steel. As of December 31, 2018, the Bank's exposure to Hanjin Heavy Industries and Construction increased to ₩1,233.1 billion from ₩1,145.4 billion as of December 31, 2017, primarily due to an increase in guarantees. As of December 31, 2018, the Bank's exposure to Hyundai Merchant Marine increased to ₩1,818.6 billion from ₩1,095.5 billion as of December 31, 2017, primarily due to the Bank's purchase of perpetual bonds issued by Hyundai Merchant Marine in October 2018. As of December 31, 2018, the Bank's exposure to Daehan Shipbuilding increased to ₩986.0 billion from ₩756.9 billion as of December 31, 2017, primarily due to an increase in guarantees. As of December 31, 2018, the Bank's exposure to Hanjin Shipping decreased to ₩60.1 billion from ₩363.1 billion as of December 31, 2017, primarily due to the write-offs of some of the Bank's outstanding loans. As of December 31, 2018, the Bank's exposure to STX Heavy Industries decreased to ₩138.4 billion from ₩269.2 billion as of December 31, 2017, primarily due to a decrease in guarantees.

As of December 31, 2018, the Bank established provisions of ₩933.7 billion for its exposure to DSME, ₩872.8 billion for STX Offshore & Shipbuilding, ₩502.2 billion for Dongbu Steel, ₩296.8 billion for Hanjin Heavy Industries and Construction, ₩107.5 billion for Hyundai Merchant Marine, ₩513.4 billion for Daehan Shipbuilding, ₩60.1 billion for Hanjin Shipping and ₩95.4 billion for STX Heavy Industries.

Companies in the STX Group, a large Korean conglomerate primarily engaged in shipbuilding and trading, have faced financial difficulties for the past several years due to prolonged slowdowns in the Korean construction, shipbuilding and shipping industries. STX Pan Ocean had been in court receivership since June 2013 and was sold to Harim Group in June 2015. STX Construction has been in court receivership since April 2013. STX Offshore & 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 August 2016, STX Heavy Industries filed for court receivership, and in January 2017, the Seoul Central District Court approved its rehabilitation plan, which included debt-to-equity swaps. Subsequently, in November 2018, STX Heavy Industries filed a revised rehabilitation plan, which included liquidation of revolving facilities using funds obtained through disposal of assets pledged as collateral, which was passed by a vote of the shareholders and creditors, including the Bank, and in February 2019, STX Heavy Industries exited court receivership. In December 2017, the creditors of STX Engine, including the Bank, and UAMCO Ltd., a private bad asset clearing house in Korea, signed a stock purchase agreement in which the creditors agreed to sell off an 87% stake in STX Engine for ₩185.2 billion. In April 2018, the creditors of STX Corporation, including the Bank, and AFC Korea, a Chinese private equity fund, signed a stock purchase agreement in which the creditors agreed to sell an 86.3% stake in STX Corporation for ₩68.5 billion.

Companies in the Dongbu Group, a large Korean conglomerate providing industrial, chemical, shipping, insurance and financial products and services, have 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. Certain troubled companies in the Dongbu Group are in voluntary out-of-court debt restructuring programs with their creditors. Dongbu Steel entered into a voluntary workout agreement with its creditors, including the Bank, in October 2015, which is scheduled to expire in 2020. In April 2019, a consortium formed by KG Group and Cactus Private Equity was selected as the preferred bidder for the sale of Dongbu Steel. The Bank is the main creditor bank of STX Group and Dongbu Group.

In May 2016, Hanjin Shipping, Korea's largest container operator, submitted itself to joint management with the Bank, as its largest creditor, and other creditors in an effort to revive itself from financial difficulties. In August

2016, the Bank and the other creditors rejected Hanjin Shipping's last funding plan, and Hanjin Shipping entered into court receivership in September 2016 and was declared bankrupt in February 2017.

In January 2019, Hanjin Heavy Industries and Construction Philippines, a subsidiary of Hanjin Heavy Industries and 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 normalization plan including a debt-to-equity swap and capital reduction for Hanjin Heavy Industries and Construction, as a result of which the Bank has become the largest shareholder of Hanjin Heavy Industries and Construction.

In July 2016, Hyundai Merchant Marine 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 Hyundai Merchant Marine, which resulted in the Bank becoming the largest shareholder of Hyundai Merchant Marine. In October 2018, the Bank injected ₩1 trillion in emergency aid into Hyundai Merchant Marine in order to normalize its operations by purchasing bonds with warrants and convertible bonds issued by Hyundai Merchant Marine. As of December 31, 2018, the Bank's equity interest in Hyundai Merchant Marine was 13.1%.

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 of its shares in DSME amounting to approximately ₩2 trillion (in the form of contributions-in-kind) to Korea Shipbuilding & Offshore Engineering, a newly established sub-holding company that was spun off from Hyundai Heavy Industries to control its shipbuilding companies, in return for an equity stake in Korea Shipbuilding & Offshore Engineering. It is expected that, following the execution of this agreement, Hyundai Heavy Industries will become the largest shareholder of DSME, followed by the Bank holding the second largest stake in DSME. The completion of this transaction is subject to various conditions, including approval from the anti-trust authorities of the European Union and applicable countries.

In January 2016, the prosecutors' office of Korea began investigating allegations of mismanagement and accounting irregularities at DSME, including the Bank's dealings with and oversight of DSME. Concurrent with the prosecutors' investigation, in June 2016, the Board of Audit and Inspection, the audit agency of the Government, submitted to financial regulators its reports showing DSME had overstated its operating profit in 2013 and 2014 and criticized the Bank, as the lead creditor bank and largest shareholder of DSME, for alleged mismanagement and loose oversight of DSME, which allegedly led to the failure to uncover the alleged accounting irregularities contributing to further losses at DSME. In December 2016, the prosecutors indicted the Bank's former chief executive officer, who had served from 2011 to 2013, for alleged malpractice, bribery and abuse of power. In May 2017, the Seoul Central District Court convicted him of charges of bribery and abuse of power and sentenced him to four years in prison. On appeal, in November 2017, the Seoul High Court convicted him on additional charges of corruption for allegedly pressuring the then chief executive officer of DSME to invest in his friend's biotech company between 2011 and 2012, among other misconducts, and extended his sentence to five years and two months. Although the Bank believes its dealings regarding DSME were carried out in compliance with relevant guidelines and procedures, the Bank cannot predict whether the outcome of the investigation by the prosecutors into DSME may be adverse to the Bank. In addition, further investigations may be launched by other governmental authorities with respect to the Bank's dealings with DSME, including those by the Bank's other former officers. An adverse determination by the prosecutors or other governmental authorities may result in regulatory sanctions and/or financial penalties as well as reputational harm to the Bank.

In the event that the financial condition of these companies or other large corporations to which the Bank extended credits deteriorate in the future, the Bank may be required to record additional provisions for credit losses, as well as charge-offs and valuation or impairment losses or losses on disposal, which may have a material adverse effect on its financial condition and results of operations.

In 2018, the Bank sold non-performing loans worth ₩472.8 billion to UAMCO Ltd., Daesin F&I Co., Ltd. and Mirae Asset Global Investments.

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 installments 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 Bank charges, on average, interest of 1.8% over its prime rate, although the Bank provides a discount between 0.2% and 1.0% to small- and medium-sized companies. The Bank adjusts the prime rate monthly. The spread depends on 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 centralized 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 programs 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 collateralized or guaranteed.

The Bank's overall risk management policy is set by the Risk Management Committee. For detailed information regarding the Bank's risk management policy and procedures, see Note 55 of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

The following table sets out, by currency and category of loan, the Bank's total outstanding loans:

Loans[1]

	December 31,	
	2017	2018
	(billions of won)	
Equipment Capital Loans:		
Domestic Currency	₩ 48,964.6	₩ 46,634.0
Foreign Currency[2]	7,015.4	6,307.1
	55,980.0	52,941.1
Working Capital Loans:		
Domestic Currency[3]	49,624.8	51,158.3
Foreign Currency[2]	5,931.6	7,011.0
	55,556.4	58,169.3
Other Loans[4]	28,468.8	26,665.2
Total Loans	₩140,005.2	₩137,775.6

(1) Includes loans extended to affiliates.
(2) Includes loans disbursed and repayable in Won, the amounts of which are based upon an equivalent amount of foreign currency. This type of loan totaled ₩7,793.2 billion as of December 31, 2017 and ₩7,587.1 billion as of December 31, 2018. See "— Operations — Loan Operations — Loans by Categories — Local Currency Loans Denominated in Foreign Currencies."
(3) Includes loans on households.
(4) 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 December 31, 2018, the Bank had ₩137,775.6 billion in outstanding loans, which represents a 1.6% decrease from ₩140,005.2 billion of outstanding loans as of December 31, 2017.

Maturities of Outstanding Loans

The following table categorizes the Bank's outstanding equipment capital and working capital loans by their remaining maturities:

Outstanding Equipment Capital and Working Capital Loans by Remaining Maturities[1]

	December 31,		As % of December 31, 2018 Total
	2017	2018	
	(billions of won, except percentages)		
Loans with Remaining Maturities of One Year or Less	₩ 50,475.0	₩ 47,734.6	43.0%
Loans with Remaining Maturities of More Than One Year	61,061.4	63,375.8	57.0
Total	₩111,536.4	₩111,110.4	100.0%

(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, categorized by industry sector:

Outstanding Equipment Capital and Working Capital Loans by Industry Sector(1)

	December 31,		As % of December 31, 2018 Total
	2017	2018	
	(billions of won, except percentages)		
Manufacturing	₩ 55,204.0	₩ 54,563.5	49.1%
Banking and Insurance	25,373.6	26,142.6	23.5
Transportation	7,075.5	7,020.6	6.3
Public Administration	778.8	692.0	0.6
Electric, Gas and Water Supply Industry	3,409.8	4,018.9	3.6
Others(2)	19,694.7	18,672.8	16.9
Total	₩111,536.4	₩111,110.4	100.0%
Percentage increase (decrease) from previous period	(1.6)%	(0.4)%	

(1) Includes loans extended to affiliates.
(2) Includes wholesale and retail trade, real estate and leasing, and construction.

The manufacturing sector accounted for 49.1% of the Bank's outstanding equipment capital and working capital loans as of December 31, 2018. As of December 31, 2018, loans to the transportation equipment manufacturing businesses and the metal product manufacturing businesses accounted for 12.7% and 13.4%, 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 December 31, 2018, accounting for 5.1% of the Bank's outstanding equipment capital and working capital loans. As of December 31, 2018, the Bank's five largest borrowers and 20 largest borrowers accounted for 13.4% and 23.7%, respectively, of its 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 December 31, 2018 by industry sector:

20 Largest Borrowers by Industry Sector

	As % of December 31, 2018 Total Outstanding Equipment Capital and Working Capital Loans to Our 20 Largest Borrowers
Manufacturing	26.6%
Banking and Insurance	60.1
Transportation	5.2
Electric, Gas and Water Supply Industry	4.0
Others(1)	4.1
Total	100.0%

(1) Includes wholesale and retail trade, real estate and leasing, and construction.

The following table categorizes the new loans made by the Bank by industry sector:

New Loans by Industry Sector

	Year Ended December 31, 2017	Year Ended December 31, 2018	As % of Year Ended December 31, 2018 Total
	(billions of won, except percentages)		
Manufacturing	₩28,691.1	₩28,898.7	60.6%
Banking and Insurance	4,801.8	4,813.9	10.1
Transportation	3,133.3	3,161.2	6.6
Electric, Gas and Water Supply Industry	1,107.3	1,360.8	2.9
Others(1)	8,865.3	9,423.5	19.8
Total	₩46,598.8	₩47,658.1	100.0%
Percentage increase (decrease) from previous period	5.8%	2.3%	

(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 December 31, 2018:

	Equipment Capital Loans(1)		Working Capital Loans(1)	
	December 31, 2018	%	December 31, 2018	%
	(billions of won, except percentages)			
Industrial fund loans	₩40,943.8	77.3%	₩37,455.1	64.4%
On-lending loans	3,166.0	6.0	12,267.6	21.1
Foreign currency loans	4,050.4	7.7	1,598.1	2.7
Local currency loans denominated in foreign currencies	25.7	0.0	31.6	0.1
Offshore loans in foreign currencies	1,331.5	2.5	4,364.4	7.5
Government fund loans	191.8	0.4	—	—
Overdraft	—	—	123.9	0.2
Others(1)	3,235.9	6.1	2,328.6	4.0
Total	₩52,941.1	100.0%	₩58,169.3	100.0%

(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 organizations 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:

Guarantees Outstanding

	As of December 31,	
	2017	**2018**
	(billions of won)	
Acceptances	₩ 399.2	₩ 631.3
Guarantees on local borrowing	1,055.5	1,104.6
Guarantees on foreign borrowing	6,311.7	6,057.4
Letter of guarantee for importers	37.1	54.5
Total	₩7,803.5	₩7,847.8

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 privatization program, 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 programs, 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 favorable opportunities for sale arise. The Bank's equity investments increased to ₩34,823.2 billion as of December 31, 2018 from ₩34,334.6 billion as of December 31, 2017.

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 December 31, 2018, the cost basis of the Bank's equity investments subject to restriction under the KDB Act and its Articles of Incorporation totaled ₩12,276.9 billion, equal to 31.2% 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 December 31, 2018:

Equity Investments

	Book Value as of December 31, 2018
	(billions of won)
Electric, Gas and Water Supply Industry	₩18,015.1
Construction	985.6
Banking and Insurance	8,877.9
Real Estate Business	3,778.9
Manufacturing	459.7
Transportation	1,522.9
Others	1,183.1
Total	₩34,823.2

As of December 31, 2018, the Bank held total equity investments, on a book value basis, of ₩643.3 billion in one of its five largest borrowers and ₩771.8 billion in four 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 December 31, 2018, the aggregate value of the Bank's equity investments accounted for approximately 96.9% 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 subsidized 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 analyzes and managerial assistance; and
- offering trust services.

As of December 31, 2018, the Bank held in trust cash and other assets totaling ₩32,564.9 billion, and the Bank generated in 2018 trust fee income equaling ₩136.7 billion. As of December 31, 2017, the Bank held in trust cash and other assets totaling ₩33,970.6 billion, and the Bank generated in 2017 trust fee income equaling ₩136.6 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 2017 and 2018, 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 December 31, 2018:

Type of Funds Borrowed	**As of December 31, 2018**
	(billions of won)
General Purpose	₩ 193.8
Special Purpose	3,794.6
Total	₩3,998.4

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 December 31, 2018:

Outstanding Balance	**As of December 31, 2018**
	(billions of won)
Denominated in Won	₩ 96,161.1
Denominated in Other Currencies	23,964.8
Total	₩120,125.9

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 December 31, 2018, 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 December 31, 2018) was ₩132,954.8 billion, equal to 22.5% of the Bank's authorized amount under the KDB Act, which was ₩589,621.3 billion.

In 2018, the Bank issued ₩51.7 trillion in Won-denominated industrial finance bonds and ₩6.0 trillion in industrial finance bonds denominated in other currencies. In 2019, the Bank is targeting to issue approximately ₩50.0 trillion in Won-denominated industrial finance bonds and approximately ₩5.6 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 December 31, 2018, the outstanding amount of the Bank's foreign currency borrowings was US$12.2 billion.

The Bank's long term and short term foreign currency borrowings increased to ₩13,609.5 billion as of December 31, 2018 from ₩11,875.7 billion as of December 31, 2017.

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 December 31, 2018, demand deposits held by the Bank totaled ₩1,892.9 billion and time and savings deposits held by the Bank totaled ₩27,275.6 billion.

Debt

Debt Repayment Schedule

The following table sets out the Bank's principal repayment schedule as of December 31, 2018:

Debt Principal Repayment Schedule[1]

	Maturing on or before December 31,				
Currency[2][3]	**2019**	**2020**	**2021**	**2022**	**Thereafter**
			(billions of won)		
Won	₩47,473.4	₩22,512.7	₩ 7,215.7	₩3,742.9	₩20,330.9
Foreign	16,343.9	4,784.9	4,568.9	3,606.5	8,257.7
Total Won Equivalent	₩63,817.3	₩27,297.6	₩11,784.6	₩7,349.4	₩28,588.6

(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 December 31, 2018, as announced by the Seoul Money Brokerage Services Ltd.
(3) The Bank categorizes 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 summarizes, as of December 31 of the years indicated, the Bank's outstanding direct internal debt:

Direct Internal Debt

	(billions of Won)
2014	99,441.9
2015	100,119.6
2016	92,692.8
2017	103,339.2
2018	103,443.1

The following table summarizes, as of December 31 of the years indicated, the Bank's outstanding direct external debt:

Direct External Debt

	(billions of Won)
2014	37,260.0
2015	37,341.4
2016	38,264.9
2017	34,772.6
2018	41,873.4

The following table sets out, by currency and the equivalent amount in U.S. Dollars, the Bank's outstanding external bonds as of December 31, 2018:

External Bonds

	Amount in Original Currency		Equivalent Amount in U.S. Dollars[(1)]
	(millions)		
US$	US$	16,306	US$16,306
Japanese yen (¥)	¥	78,738	714
Euro (EUR)	EUR	1,200	1,373
Singapore dollar (SGD)	SGD	70	51
Hong Kong dollar (HKD)	HKD	3,892	497
Chinese offshore renminbi (CNH)	CNH	8,989	1,309
Swiss franc (CHF)	CHF	300	305
Brazilian real (BRL)	BRL	3,147	811
Australian dollar (AUD)	AUD	1,028	724
Great Britain Sterling (GBP)	GBP	250	318
New Zealand dollar (NZD)	NZD	300	201
Norwegian Krone (NOK)	NOK	700	80
South African Rand (ZAR)	ZAR	—	—
Indonesian Rupiah (IDR)	IDR	670,000	46
Indian Rupee (INR)	INR	4,482	64
Swedish Krona (SEK)	SEK	1,410	157
Total			US$22,956

(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 December 31, 2018.

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 and Tashkent. 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 nine branches in Tokyo, Shanghai, Singapore, New York City, London, Beijing, Guangzhou, Qingdao and Shenyang and nine overseas representative offices in Frankfurt, Ho Chi Minh City, Abu Dhabi, Yangon, Moscow, Manila, Sydney, Bangkok and Jakarta.

Property

The Bank's head office is located at 14, Eunhaeng-ro, Yeongdeungpo-gu, Seoul, Korea, a 35,996 square meter building completed in July 2001 and owned by the Bank. In addition to the head office, the Bank maintains 74 branches in major cities throughout the Republic, including 22 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. As of March 31, 2019, the members of the Bank's Board of Directors were:

Position	Name	Expiration of Term
Chief Executive Officer and Chairman of the Board of Directors	Dong Gull Lee	September 10, 2020
Chief Operating Officer and Vice Chairman of the Board of Directors	Joo Yung Sung	January 2, 2022
Auditor	Cheol Hwan Seo	February 25, 2021
Independent Non-executive Directors	Nam Joon Kim	June 27, 2020
	Jung Sik Kim	June 27, 2020
	Yoon Lee	July 31, 2020
	Chae Yeol Yang	May 25, 2020
	Bang Gil Choi	March 28, 2020

As of December 31, 2018, the Bank employed 3,149 persons with 1,946 persons located in the Bank's Seoul head office.

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 Cheol-Hwan Seo, who was appointed by the Financial Services Commission for a three-year term on February 26, 2018.

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 December 31, 1998. As of the date of this Offering Circular, 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 December 31, 2018 and 2017 included in this Offering Circular.

The Bank's separate financial statements appearing in this Offering Circular were prepared in conformity with Korean IFRS, as summarized in Note 2 of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular. 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 January 1, 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 year ended December 31, 2018 included in this Offering Circular. As permitted by the transition rules of K-IFRS 1109, the Bank's comparative separate financial statements as of and for the year ended December 31, 2017 included in this Offering Circular have not been restated to retroactively apply K-IFRS 1109 and are not directly comparable to the Bank's separate financial statements as of and for the year ended December 31, 2018. For information regarding the impact of the application of K-IFRS 1109 on the Bank's separate financial statements, see Note 2(2) of the notes to the Bank's separate financial statements of December 31, 2018 and 2017 included in this Offering Circular.

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 amortized 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 July 1, 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.

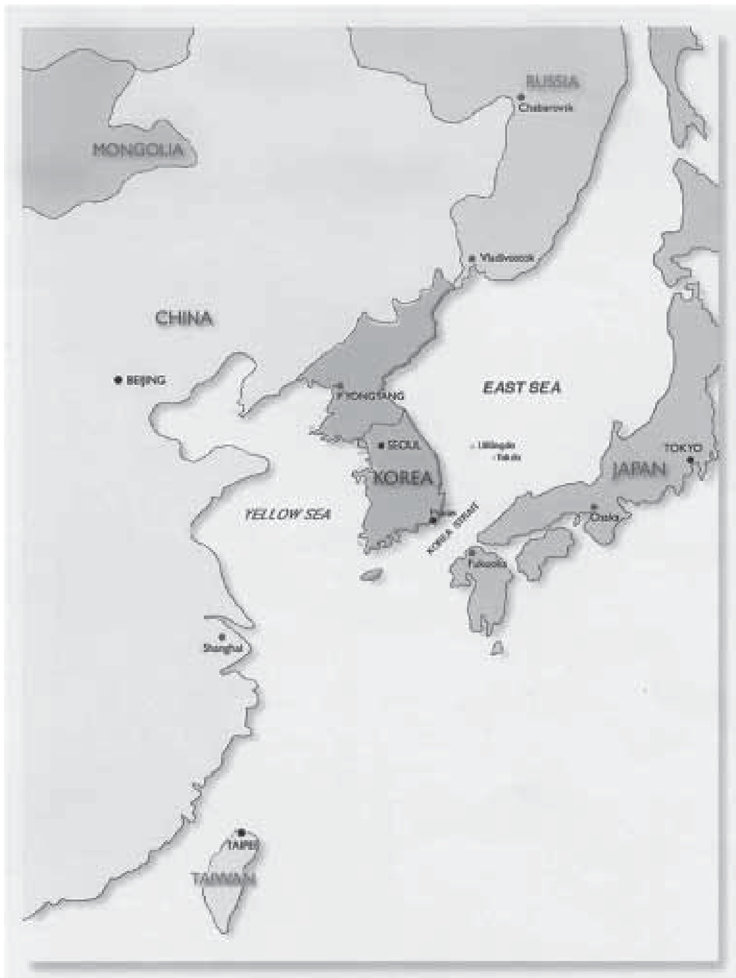
THE REPUBLIC OF KOREA

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 internationalized 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 August 15, 2007, 85 members of the National Assembly, previously belonging to the Uri Party, or the Democratic Party, formed the United New Democratic Party (the "UNDP"). The Uri Party merged into the UNDP on August 20, 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 February 25, 2008. On April 9, 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 December 2012, the country elected Park Geun-hye as President. She commenced her term on February 25, 2013. On December 9, 2016, the National Assembly voted in favor of impeaching President Park for a number of alleged constitutional and criminal violations, including violation of the Constitution and abuse of power by allowing her confidant to exert influence on state affairs and allowing senior presidential aides to aid in her extortion from companies. President Park was suspended from power immediately, with the prime minister simultaneously taking over the role of acting President. On March 10, 2017, the Constitutional Court unanimously upheld the parliamentary vote to impeach President Park, triggering her immediate dismissal. On April 17, 2017, the Korean prosecutor's office indicted former President Park on charges of bribery, abuse of power and coercion, among others. On August 24, 2018, the Seoul High Court found former President Park guilty on many of the charges, including bribery, abuse of power and coercion, and sentenced her to 25 years in prison and assessed a fine of Won 20 billion.

A special election to elect a new President was held on May 9, 2017 and the country elected Moon Jae-in as President. He commenced his term on May 10, 2017. The Moon administration's key policy priorities include:

- investigating corruption involving high-ranking government officials, anti-corruption and reform of chaebol (Korean conglomerates);

- denuclearization of and establishing peace on the Korean Peninsula and enhancing Korea's core military strength in response to North Korea's nuclear capabilities;
- reducing fine dust emissions, closing old nuclear power plants and reexamining the construction of new nuclear power plants;
- creating new jobs, resolving youth unemployment and enacting laws prohibiting discrimination against non-regular workers;
- creating jobs for senior citizens, increasing basic pension and providing government subsidies for Alzheimer's disease treatment; and
- protecting small business owners and restricting establishment of large-scale stores and multi-complex shopping malls.

Government and Politics

Government and Administrative Structure

Governmental authority in the Republic is centralized 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 20th legislative general election was held on April 13, 2016 and the term of the National Assembly members elected in the 20th legislative general election commenced on May 30, 2016. Currently, there are four major political parties: The Minjoo Party of Korea, or MPK, the Liberty Korea Party, or LKP, the Bareun Future Party, or BFP, and the Party for Democracy and Peace, or PDP.

As of June 30, 2019, the parties control the following number of seats in the National Assembly:

	MPK	LKP	BFP	PDP	Others	Total
Number of seats	128	111	28	14	17	298

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 demilitarized 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 demilitarized zone, and 7 million reserves. The Republic's military forces, composed of approximately 630,000 regular troops and 3 million reserves, maintain a state of military preparedness along the southern side of the demilitarized 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.

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 programs 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 program 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 program), 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 demilitarized zone. Claiming the landmines were set by North Koreans, the Korean army re-initiated its propaganda program toward North Korea utilizing loudspeakers near the demilitarized 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 Organizations

The Republic maintains diplomatic relations with most nations of the world, most importantly with the United States with which it entered into a mutual defense 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 organizations, including:

- United Nations;
- the International Monetary Fund, or the IMF;
- the World Bank;
- the Asian Development Bank, or 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 Trade Organization, or WTO;
- the Inter-American Development Bank, or IDB; and
- the Organization for Economic Cooperation and Development, or OECD.

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 December 31,				
	2014	2015	2016	2017	2018 (6)
	(billions of dollars and trillions of Won, except percentages)				
GDP Growth (at current prices)	4.0%	5.3%	5.0%	5.4%(6)	3.0%(6)
GDP Growth (at chained 2010 year prices)	3.3%	2.8%	2.9%	3.1%(6)	2.7%(6)
Inflation	1.3%	0.7%	1.0%	1.9%	1.5%
Unemployment(1)	3.5%	3.6%	3.7%	3.7%	3.8%
Trade Surplus(2)	$ 47.2	$ 90.3	$ 89.2	$ 95.2	$ 69.7
Foreign Currency Reserves	$ 363.6	$ 368.0	$ 371.1	$ 389.3	$ 403.7
External Liabilities(3)	$ 424.3	$ 396.1	$ 382.2	$ 412.0	$ 440.6(6)
Fiscal Balance	₩ 8.5	₩ (0.2)	₩ 16.9	₩ 24.0(6)	₩ 31.2(6)
Direct Internal Debt of the Government(4) (as % of GDP(5))	34.6%	37.3%	38.5%	39.8%(6)	40.3(6)
Direct External Debt of the Government(4) (as % of GDP(5))	0.5%	0.5%	0.4%	0.5%(6)	0.5(6)

(1) Average for year.
(2) Derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods include insurance and freight cost.
(3) Calculated under the criteria based on the sixth edition of Balance of Payment Manual, or BPM6, published by the International Monetary Fund in December 2010.
(4) 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.
(5) At chained 2010 year prices.
(6) 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 financial difficulties affecting many governments worldwide, in particular in southern Europe and Latin America;
- the slowdown of economic growth in China and other major emerging market economies;
- interest rate fluctuations as well as the possibility of increases in policy rates by the U.S. Federal Reserve and other central banks;
- political and social instability in various countries in the Middle East and Northern Africa, including Iraq, Syria and Yemen, as well as in the Ukraine and Russia; and
- fluctuations in oil and commodity prices.

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.

As a result of adverse global financial and economic conditions, there has been significant volatility in the Korea Composite Stock Index in recent years. See "— The Financial System — Securities Markets." There is no guarantee that the stock prices of Korean companies will not decline again in the future. Future 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 continue to 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. In addition, the value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has fluctuated widely in recent years. 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 the event that difficult conditions in the global credit markets continue or the global economy deteriorates 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:

- steadily rising household debt consisting of housing loans and merchandise credit, which increased to approximately ₩1,534.6 trillion as of December 31, 2018 from ₩843.2 trillion as of December 31, 2010, primarily due to increases in mortgage loans and purchases with credit cards;
- a slowdown in consumer spending and depressed consumer sentiment, due in part to national tragedies including the sinking of the Sewol passenger ferry in April 2014, which led to the death of hundreds of passengers, and the outbreak of infectious diseases, such as the outbreak of the Middle East Respiratory Syndrome ("MERS") in May 2015, which resulted in the death of over 30 people and the quarantine of thousands;
- a substantial increase in the Korean government's expenditures for pension and social welfare programs, due in part to an aging population (defined as the population of people aged 65 years or older) that accounts for 14.3% of the Republic's total population as of December 31, 2018, an increase from 7.2% as of December 31, 2000, and is expected to surpass 15.6% in 2020 and 21.1% in 2026, which could lead to a Korean government budget deficit;
- increasing delinquencies and credit defaults by consumer and small- and medium-sized enterprise borrowers;
- decreases in the market prices of Korean real estate;
- the occurrence of severe health epidemics, including epidemics that affect the livestock industry; and
- deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the ongoing controversy between Korea and China regarding the decision to allow the United States to deploy the Terminal High Altitude Area Defense system in Korea or the ongoing trade disputes with Japan).

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) recognizing 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 following table sets out the composition of the Republic's GDP at current market and chained 2010 year prices and the annual average increase in the Republic's GDP.

Gross Domestic Product

	2014	2015	2016	2017(1)	2018(1)	As % of GDP 2018(1)
			(billions of Won)			
Gross Domestic Product at Current Market Prices:						
Private	748,200.8	771,239.2	798,728.9	832,234.7	867,042.9	48.6
Government	224,724.2	234,766.4	249,166.9	265,347.0	286,730.4	16.1
Gross Capital Formation	435,078.1	452,315.1	480,261.6	537,732.6	537,935.9	30.2
Exports of Goods and Services	747,134.3	709,122.0	694,216.1	745,645.6	784,379.3	44.0
Less Imports of Goods and Services	(669,058.0)	(600,239.3)	(581,662.3)	(652,156.8)	(694,973.9)	(39.0)
Statistical Discrepancy	—	(3,079.4)	1,074.9	1,595.5	1,154.4	0.1
Expenditures on Gross Domestic Product	1,486,079.3	1,564,123.9	1,641,786.0	1,730,398.5	1,782,268.9	100.0
Net Factor Income from the Rest of the World	4,684.5	4,259.2	4,422.8	62.9	(1,177.9)	(0.1)
Gross National Income(2)	1,490,763.9	1,568,383.1	1,646,208.9	1,730,461.4	1,781,091.0	99.9
Gross Domestic Product at Chained 2010 Year Prices:						
Private	692,236.0	707,492.7	725,362.3	744,284.4	765,417.4	47.9
Government	205,869.2	212,021.6	221,514.2	229,100.7	241,919.4	15.1
Gross Capital Formation	430,685.5	462,114.3	488,039.9	537,370.0	527,195.5	33.0
Exports of Goods and Services	804,797.1	803,746.1	824,330.0	840,019.9	875,264.8	54.8
Less Imports of Goods and Services	(706,938.4)	(721,740.4)	(755,861.0)	(808,985.5)	(822,891.8)	(51.5)
Statistical Discrepancy	1,019.1	2,481.2	3,261.9	3,366.9	1,444.6	0.1
Expenditures on Gross Domestic Product(3)	1,426,972.4	1,466,788.3	1,509,755.0	1,555,995.3	1,597,514.1	100.0
Net Factor Income from the Rest of the World in the Terms of Trade	4,706.4	4,249.8	4,293.6	261.0	(1,049.0)	(0.1)
Trading Gains and Losses from Changes in the Terms of Trade	(14,000.4)	38,787.9	59,905.0	65,729.0	42,198.1	2.6
Gross National Income(4)	1,417,814.2	1,510,005.6	1,574,137.3	1,622,212.6	1,638,879.4	102.6
Percentage Increase (Decrease) of GDP over Previous Year:						
At Current Prices	4.0	5.3	5.0	5.4	3.0	
At Chained 2010 Year Prices	3.3	2.8	2.9	3.1	2.7	

(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)

	2014	2015	2016	2017(1)	2018(1)	As % of GDP 2018(1)
			(billions of Won)			
Industrial Sectors:	547,231.2	578,352.0	608,403.1	654,616.6	661,339.9	37.1
Agriculture, Forestry and Fisheries	31,560.3	32,612.2	31,647.0	33,935.4	35,348.0	2.0
Mining and Manufacturing	411,030.4	426,228.8	442,502.4	479,927.3	488,053.3	27.4
Mining and Quarrying	2,520.2	2,577.1	2,802.1	2,815.2	2,772.1	0.2
Manufacturing	408,510.2	423,651.7	439,700.3	477,112.1	485,281.2	27.2
Electricity, Gas and Water Supply	37,373.8	44,988.9	49,879.4	47,531.0	43,780.6	2.5
Construction	67,266.7	74,522.1	84,374.3	93,222.9	94,158.0	5.3
Services:	807,624.1	845,294.8	882,458.9	914,424.9	954,651.7	53.6
Wholesale and Retail Trade, Restaurants and Hotels	152,205.2	156,363.1	164,350.4	168,423.0	173,940.3	9.8
Transportation and Storage	50,306.8	56,154.6	59,230.7	56,987.2	54,721.1	3.1
Finance and Insurance	75,859.8	78,699.7	81,075.7	85,784.4	94,582.7	5.3
Real Estate and Leasing	109,549.0	114,618.7	118,359.9	122,262.5	125,357.3	7.0
Information and Communication	52,510.8	54,257.2	56,710.7	57,581.0	58,265.4	3.3
Business Activities	100,936.7	106,944.2	110,894.2	115,417.2	120,751.9	6.8
Public Administration and Defense	98,333.5	102,848.3	107,601.0	114,832.9	121,821.4	6.8
Education	74,007.8	76,237.2	77,664.4	79,432.7	82,936.4	4.7
Health and Social Work	57,129.7	61,980.4	68,100.9	74,356.4	81,116.2	4.6
Cultural and Other Services	36,784.7	37,191.4	38,471.0	39,347.6	41,159.0	2.3
Taxes Less Subsidies on Products	131,224.0	140,477.2	150,924.2	161,356.9	166,277.4	9.3
Gross Domestic Product at Current Market Prices	1,486,079.3	1,564,123.9	1,641,786.0	1,730,398.5	1,782,268.9	100.0
Net Factor Income from the Rest of the World	4,684.5	4,259.2	4,422.8	62.9	(1,177.9)	(0.1)
Gross National Income at Current Market Price	1,490,763.9	1,568,383.1	1,646,208.9	1,730,461.4	1,781,091.0	99.9

(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)

	2014	2015	2016	2017[1]	2018[1]
GDP per capita (thousands of Won)	29,284	30,660	32,038	33,635	34,517
GDP per capita (U.S. dollar)	27,805	27,097	27,607	29,744	31,370
Average Exchange Rate (in Won per U.S. dollar)	1,053.2	1,131.5	1,160.5	1,130.8	1,100.3

(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)

	2014	2015	2016	2017[1]	2018[1]
GNI per capita (thousands of Won)	29,377	30,744	32,124	33,636	34,494
GNI per capita (U.S. dollar)	27,892	27,171	27,681	29,745	31,349
Average Exchange Rate (in Won per U.S. dollar)	1,053.2	1,131.5	1,160.5	1,130.8	1,100.3

(1) Preliminary.
Source: The Bank of Korea.

The following table sets out the Republic's GDP by economic sector at chained 2010 year prices:

Gross Domestic Product by Economic Sector

(at chained 2010 year prices)

	2014	2015	2016	2017(1)	2018(1)	As % of GDP 2018(1)
			(billions of Won)			
Industrial Sectors:	527,016.1	538,722.4	554,601.8	578,753.1	592,775.4	37.1
Agriculture, Forestry and Fisheries	29,378.2	29,251.4	28,441.6	28,530.8	28,946.2	1.8
Mining and Manufacturing	413,839.1	421,057.7	430,968.9	449,483.8	465,349.0	29.1
Mining and Quarrying	2,344.40	2,314.5	2,357.1	2,221.1	2,081.8	0.1
Manufacturing	411,494.7	418,743.2	428,611.8	447,262.7	463,267.2	29.0
Electricity, Gas and Water Supply	27,327.9	28,722.1	29,495.0	30,399.3	31,076.0	1.9
Construction	56,470.9	59,691.2	65,696.3	70,339.2	67,404.2	4.2
Services:	764,283.7	786,394.3	806,312.4	823,800.7	847,416.9	53.0
Wholesale and Retail Trade, Restaurants and Hotels	149,150.5	152,013.0	156,323.0	157,472.7	159,604.0	10.0
Transportation and Storage	48,646.9	49,486.3	50,616.8	51,765.3	52,761.1	3.3
Finance and Insurance	83,020.5	88,568.7	90,844.7	94,249.9	98,811.1	6.2
Real Estate and Leasing	97,112.9	98,773.8	99,559.1	100,496.5	102,651.8	6.4
Information and Communication	55,164.8	56,532.2	58,282.1	59,743.4	61,362.3	3.8
Business Activities	91,424.0	95,713.9	97,986.2	99,948.1	101,890.5	6.4
Public Administration and Defense	87,052.8	88,495.2	90,625.4	93,008.8	96,277.5	6.0
Education	64,865.2	65,158.4	65,234.3	65,574.5	66,970.3	4.2
Health and Social Work	54,740.1	58,653.1	63,157.9	67,738.3	72,806.4	4.6
Cultural and Other Services	33,106.0	32,999.7	33,682.9	33,803.2	34,281.9	2.1
Taxes Less Subsidies on Products	136,454.6	142,688.3	149,817.1	154,793.8	160,329.5	10.0
Gross Domestic Product at Chained 2010 Year Prices(2)	1,426,972.4	1,466,788.3	1,509,755.0	1,555,995.3	1,597,514.1	100.0

(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 2014 was 3.3% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 2.0%, exports of goods and services increased by 2.0% and gross domestic fixed capital formation increased by 3.4%, which more than offset an increase in imports of goods and services by 1.5%, each compared with 2013.

GDP growth in 2015 was 2.8% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 2.4% and gross domestic fixed capital formation increased by 5.1%, which more than offset a decrease in exports of goods and services by 0.1% and an increase in imports of goods and services by 2.1%, each compared with 2014.

GDP growth in 2016 was 2.9% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 3.0%, gross domestic fixed capital formation increased by 5.6% and exports of goods and services increased by 2.6%, which more than offset an increase in imports of goods and services by 4.7%, each compared with 2015.

Based on preliminary data, GDP growth in 2017 was 3.1% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 2.8%, gross domestic fixed capital formation increased by 8.6% and exports of goods and services increased by 1.9%, which more than offset an increase in imports of goods and services by 7.0%, each compared with 2016.

Based on preliminary data, GDP growth in 2018 was 2.7% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 3.5% and exports of goods and services increased by 4.2%, which more than offset a decrease in gross domestic fixed capital formation by 2.2% and an increase in imports of goods and services by 1.7%, each compared with 2017.

Based on preliminary data, GDP growth in the first half of 2019 was 1.9% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 3.1%, exports of goods and services increased by 0.7% and imports of goods and services decreased by 2.6%, which more than offset a decrease in gross domestic fixed capital formation by 6.0%, each compared with the corresponding period of 2018.

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(1)	2014	2015	2016	2017	2018(2)
All Industries	10,000.0	100.3	100.0	102.2	104.7	106.1
Mining and Manufacturing	9,611.6	100.2	100.0	102.3	104.6	105.8
Mining	33.9	98.5	100.0	103.4	100.2	89.4
Petroleum, Crude Petroleum and Natural Gas	8.7	120.4	100.0	96.8	86.5	73.4
Metal Ores	0.9	126.6	100.0	95.0	84.0	104.8
Non-metallic Minerals	24.3	93.6	100.0	105.2	103.8	93.1
Manufacturing	9,577.7	100.3	100.0	102.3	104.6	105.9
Food Products	434.4	98.2	100.0	102.9	103.2	104.1
Beverage Products	82.4	97.2	100.0	103.6	105.7	105.2
Tobacco Products	43.2	107.9	100.0	113.0	122.4	101.0
Textiles	160.6	106.6	100.0	98.1	95.1	88.7
Wearing Apparel, Clothing Accessories and Fur Articles	145.2	104.0	100.0	96.3	95.5	93.0
Tanning and Dressing of Leather, Luggage and Footwear	42.1	105.9	100.0	93.3	82.5	84.6
Wood and Products of Wood and Cork (Except Furniture)	31.7	96.4	100.0	101.5	106.2	95.9
Pulp, Paper and Paper Products	126.8	101.1	100.0	99.4	97.2	97.2
Printing and Reproduction of Recorded Media	50.2	102.7	100.0	100.9	101.3	101.5
Coke, hard-coal and lignite fuel briquettes and Refined Petroleum Products	471.0	94.3	100.0	106.9	113.0	113.7
Chemicals and Chemical Products	847.5	97.8	100.0	105.7	109.4	111.9
Pharmaceuticals, Medicinal Chemicals and Botanical Products	144.1	98.1	100.0	109.9	118.6	128.1
Rubber and Plastic Products	421.1	100.1	100.0	100.5	99.9	94.9
Non-metallic Minerals	271.7	93.8	100.0	109.2	111.4	107.0
Basic Metals	827.6	101.7	100.0	101.7	102.6	99.4
Fabricated Metal Products	557.8	104.6	100.0	102.4	96.7	89.0
Electronic Components, Computer, Radio, Television and Communication Equipment and Apparatuses	1,794.3	98.7	100.0	105.1	112.6	125.3
Medical, Precision and Optical Instruments, Watches and Clocks	148.1	104.2	100.0	99.9	119.0	136.8
Electrical Equipment	479.5	103.4	100.0	102.8	105.5	105.2
Other Machinery and Equipment	803.6	103.2	100.0	101.4	115.1	111.8
Motor Vehicles, Trailers and Semitrailers	1,076.4	98.7	100.0	97.6	95.0	93.7
Other Transport Equipment	506.5	109.9	100.0	88.8	68.2	63.3
Furniture	69.5	94.7	100.0	107.0	110.3	102.3
Other Products	42.4	103.8	100.0	104.5	108.2	103.1
Electricity, Gas	388.4	100.7	100.0	100.8	106.3	110.2
Total Index	10,000.0	100.3	100.0	102.2	104.7	106.1

(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 0.2% in 2014, primarily due to increased exports. Industrial production decreased by 0.3% in 2015, primarily due to decreased exports. Industrial production increased by 2.2% in 2016, primarily due to increased domestic consumption. Industrial production increased by 2.4% in 2017, primarily due to increased domestic consumption and exports. Based on preliminary data, industrial production increased by 1.3% in 2018, primarily due to increased domestic consumption and exports.

Manufacturing

The manufacturing sector increased production by 0.3% in 2014, primarily due to increased demand for basic metals, machinery and equipment and motor vehicles, trailers and semitrailers. The manufacturing sector decreased production by 0.3% in 2015, primarily due to decreased demand for other transport equipment, fabricated metal products, other machinery and equipment, and basic metals. The manufacturing sector increased production by 2.3% in 2016 and by 2.2% 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. Based on preliminary data, the manufacturing sector increased production by 1.2% in 2018, primarily due to increased demand for consumer electronics products and electronic components (including semiconductors).

Automobiles

In 2014, automobile production increased by 0.1% and domestic sales volume recorded an increase of 4.6%, compared with 2013, primarily due to increased domestic demand for recreational vehicles, and export sales volume recorded a decrease of 0.8%, compared with 2013, primarily due to decreased demand for automobiles in Eastern Europe and South America. In 2015, automobile production increased by 0.7% and domestic sales volume recorded an increase of 7.7%, compared with 2014, primarily due to continued increase in domestic demand for recreational vehicles, and export sales volume recorded a decrease of 2.9%, compared with 2014, primarily due to decreased demand for automobiles in China, Russia, Eastern Europe and South America. In 2016, automobile production decreased by 7.2% and export sales volume recorded a decrease of 11.8%, compared with 2015, primarily due to the slowdown of the global economy, and domestic sales volume recorded an increase of 1.0%, compared with 2015, primarily due to the reduction of individual consumption tax on cars. Based on preliminary data, 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 unionized workers of automobile manufacturers, increased overseas production and decreased exports to the US and China. Based on preliminary data, 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 unionized workers of automobile manufacturers and the restructuring of GM Korea's production units and decreased exports to countries in South America and Middle East.

Electronics

In 2014, electronics production amounted to ₩329,389 billion, an increase of 1.2% from the previous year, and exports amounted to US$176.2 billion, an increase of 2.0% from the previous year, primarily due to increases in demand for mobile phones and semiconductors. In 2014, export sales of semiconductor memory chips constituted approximately 10.9% of the Republic's total exports. In 2015, electronics production amounted to ₩316,600 billion, a decrease of 3.9% from the previous year, and exports amounted to US$172.9 billion, a decrease of 0.6% from the previous year, primarily due to adverse global economic conditions and the expansion of overseas production. In 2015, export sales of semiconductor memory chips constituted approximately 11.9% of the Republic's total exports. In 2016, electronics production amounted to ₩309,016 billion, a decrease of 2.4% from the previous year, and exports amounted to US$162.5 billion, a decrease of 6.0% from the previous year, primarily due to continued adverse global economic conditions and the expansion of overseas production. In 2016, export sales of semiconductor memory chips constituted approximately 12.6% of the Republic's total exports. In 2017, electronics production amounted to ₩341,274 billion, an increase of 10.4% 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. Based on preliminary data, in the first eleven months of 2018, electronics production amounted to ₩310,698 billion, an increase of 0.2% from the corresponding period of 2017, and in 2018, 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.

Iron and Steel

In 2014, crude steel production totaled 71.5 million tons, an increase of 8.3% from 2013, and domestic sales volume and export sales volume of iron and steel products increased by 7.3% and 10.5%, respectively, primarily due to the recovery of domestic and global demand for crude steel products. In 2015, crude steel production totaled 69.7 million tons, a decrease of 2.6% from 2014, and domestic sales volume of iron and steel products increased by 0.6% but export sales volume of iron and steel products decreased by 2.2%, primarily due to excess supply from China and adverse conditions in the global shipbuilding and construction industries. In 2016, crude steel production totaled 68.6 million tons, a decrease of 1.6% from 2015, and export sales volume of iron and steel products decreased by 1.8%, primarily due to intensified export competition and adverse conditions in the global shipbuilding and construction industries, but domestic sales volume of iron and steel products increased by 2.2%, primarily due to the recovery of the domestic construction industry. In 2017, crude steel production totaled 71.1 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. Based on preliminary data, in 2018, crude steel production totaled 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.

Shipbuilding

In 2014, the Republic's shipbuilding orders amounted to approximately 13 million compensated gross tons, a decrease of 31.6% compared to 2013, primarily due to a downturn in the domestic and global shipbuilding industry. In 2015, the Republic's shipbuilding orders amounted to approximately 11 million compensated gross tons, a decrease of 15.4% compared to 2014, primarily due to the continued downturn in the domestic and global shipbuilding industry. In 2016, the Republic's shipbuilding orders amounted to approximately 2 million compensated gross tons, a decrease of 81.8% compared to 2015, primarily due to the continued adverse conditions in the domestic and global shipbuilding industry. 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. Based on preliminary data, 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.

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;
- mechanization 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 2013, rice production increased 5.0% from 2012 to 4.2 million tons. In 2014, rice production remained at 4.2 million tons. In 2015, rice production increased 2.4% from 2014 to 4.3 million tons. In 2016, rice production decreased 2.3% from 2015 to 4.2 million tons. In 2017, rice production decreased 5.3% from 2016 to 4.0 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 modernizing fishing equipment, marketing techniques and distribution outlets.

In 2014, the agriculture, forestry and fisheries industry increased by 3.6% compared to 2013, primarily due to increases in the price of certain livestock items, which led to increases in production and the establishment of new agriculture and fishery companies. In 2015, the agriculture, forestry and fisheries industry decreased by 0.4% compared to 2014, primarily due to unfavorable weather conditions. In 2016, the agriculture, forestry and fisheries industry decreased by 2.8% compared to 2015, primarily due to unfavorable weather conditions and a decrease in fishing catch. Based on preliminary data, in 2017, the agriculture, forestry and fisheries industry increased by 0.3% compared to 2016, primarily due to an increase in aquafarming production. Based on preliminary data, in 2018, the agriculture, forestry and fisheries industry increased by 1.5% compared to 2017, primarily due to an increase in livestock production.

Construction

In 2014, the construction industry increased by 0.8% compared to 2013, primarily due to an increase in the construction of private residential buildings. In 2015, the construction industry increased by 5.7% compared to 2014, primarily due to an increase in the construction of private residential and commercial buildings. In 2016, the construction industry increased by 10.1% compared to 2015, primarily due to an increase in the construction of private residential and commercial buildings. Based on preliminary data, in 2017, the construction industry increased by 7.1% compared to 2016, primarily due to an increase in the construction of residential and commercial buildings. Based on preliminary data, in 2018, the construction industry decreased by 4.2% compared to 2017, primarily due to a decrease in the construction of residential and commercial buildings.

Electricity and Gas

The following table sets out the Republic's dependence on imports for energy consumption:

Dependence on Imports for Energy Consumption

	Total Primary Energy Supply	Imports	Imports Dependence Ratio
	(millions of tons of oil equivalents(1), except ratios)		
2014	282.5	268.9	95.2
2015	286.9	272.0	94.8
2016	293.8	277.9	94.6
2017	302.1	284.0	94.0
2018(2)	307.3	287.3	93.5

(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 emphasizing 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

	Coal		Petroleum		Nuclear		Others (1)		Total	
	Quantity	%	Quantity	%	Quantity	%	Quantity	%	Quantity	%
	(millions of tons of oil equivalents (2), except percentages)									
2014	84,399	29.9	104,702	37.1	33,002	11.7	60,379	21.4	282,481	100.0
2015	85,401	29.8	109,094	38.0	34,765	12.1	57,675	20.1	286,936	100.0
2016	81,499	27.7	117,605	40.0	34,181	11.6	60,493	20.6	293,778	100.0
2017	86,177	28.5	119,400	39.5	31,615	10.5	64,873	21.5	302,065	100.0
2018(3)	88,210	28.7	118,143	38.4	28,437	9.3	72,501	23.6	307,291	100.0

(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.

Source: Korea Energy Economics Institute; The Bank of Korea.

The Republic's first nuclear power plant went into full operation in 1978 with a rated generating capacity of 587 megawatts. As of December 31, 2018, the Republic had 24 nuclear plants with a total estimated nuclear power installed generating capacity of 21,850 megawatts and six nuclear plants under construction. In December 2017, the Government released the "Eighth Basic Plan relating to the Long-Term Supply and Demand of Electricity" which serves as the guideline for stable medium- and long-term supply of electric power. The objectives of the Eighth Basic Plan include, among other things, (i) increasing efforts to address environmental and safety concerns, including reducing greenhouse gas emission and yellow dust, (ii) decreasing the portion of electricity supplied using nuclear and coal energy sources including through suspension of construction of new nuclear power plants, permanent closing of old coal-fired generation units and converting coal-fired generation units into LNG-fired generation units, (iii) increasing the portion of electricity supplied from renewable energy, in particular solar and wind power, and (iv) promoting the replacement of coal with LNG as an energy source by reducing the gap in expenses incurred in using the respective fuel types, for example, by adjusting the consumption tax rates applicable to the respective fuel types. The Government plans to expand infrastructure to supply natural gas to households, pursue a long-term strategy of overseas energy development projects to ensure supply stability, increase clean and renewable energy and provide support for research and development pertaining to green technologies. Since the release of the Eighth Basic Plan, the Government has reiterated its policy to slowly phase out power generation from nuclear and coal energy sources and increase the use of renewable energy sources. The Government plans to establish more detailed guidelines and set specific targets for reducing reliance on nuclear and coal power generation for the next 15 years. To that end, the Government commenced preparation of the Ninth Basic Plan in March 2019 and aims to issue the finalized plan by the end of 2019.

Services Sector

In 2014, the service industry increased by 3.3% compared to 2013 as the health and social work sector increased by 6.8%, the finance and insurance sector increased by 5.6% and the business activities sector increased by 4.8%, each compared with 2013. In 2015, the service industry increased by 2.8% compared to 2014 as the finance and insurance sector increased by 6.7%, the business activities sector increased by 4.7% and the health and social work sector increased by 7.1%, each compared with 2014. In 2016, the service industry increased by 2.5% compared to 2015 as the health and social work sector increased by 7.7%, the wholesale and retail trade, restaurants and hotels sector increased by 2.8% and the finance and insurance sector increased by 2.6%, each compared with 2015. Based on preliminary data, in 2017, the service industry increased by 2.1% compared to 2016 as the health and social work sector increased by 7.3%, the finance and insurance sector increased by 3.7% and the public administration and defense sector increased by 2.6%, each compared with 2016. Based on preliminary data, in 2018, the service industry increased by 2.8% compared to 2017 as the health and social work sector increased by 7.5%, the finance and insurance sector increased by 4.8% and the public administration and defense sector increased by 3.5%, each compared with 2017.

Prices, Wages and Employment

The following table shows selected price and wage indices and unemployment rates:

	Producer Price Index(1)	Increase (Decrease) Over Previous Year	Consumer Price Index(1)	Increase (Decrease) Over Previous Year	Wage Index(1)(2)	Increase (Decrease) Over Previous Year	Unemployment Rate(1)(3)
	(2010=100)	(%)	(2015=100)	(%)	(2015=100)	(%)	(%)
2014	105.2	(0.5)	99.3	1.3	97.1	4.1	3.5
2015	101.0	(4.0)	100.0	0.7	100.0	2.9	3.6
2016	99.1	(1.8)	101.0	1.0	104.2	4.2	3.7
2017	102.5	3.5	102.9	1.9	106.4	2.1	3.7
2018	104.6	2.0	104.5	1.5	N/A(4)	N/A(4)	3.8

(1) Average for year.
(2) Nominal wage index of average earnings in manufacturing industry.
(3) Expressed as a percentage of the economically active population.
(4) Not available.
Source: The Bank of Korea; Korea National Statistical Office.

In 2014, the inflation rate remained at 1.3%, primarily due to increases in the prices of electricity, gas, water supply, food products and education, which were offset by lower oil prices. In 2015, the inflation rate decreased to 0.7%, primarily due to lower oil prices. In 2016, the inflation rate increased to 1.0%, primarily due to increases in agricultural and livestock product prices and private service fees, which more than offset a decrease in oil prices. 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 the first quarter of 2019, the inflation rate was 0.5%. In the second quarter of 2019, the inflation rate was 0.7%.

In 2014, the unemployment rate increased to 3.5% from 3.1% in 2013, primarily due to the sluggishness of the domestic economy. In 2015, the unemployment rate increased to 3.6%, primarily due to the continued sluggishness of the domestic economy. In 2016, the unemployment rate increased to 3.7%, primarily due to the continued sluggishness of the domestic economy. 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 the first quarter of 2019, the unemployment rate was 4.5%. In the second quarter of 2019, the unemployment rate was 4.1%.

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 64% over the past decade. Literacy among workers under 50 is almost universal. As of December 31, 2018, the economically active population of the Republic was 27.9 million and the number of employees was 26.8 million.

The following table shows selected employment information by industry and by gender:

	2014	2015	2016	2017	2018
	(all figures in percentages, except as indicated)				
Labor force (in thousands of persons)	25,897	26,178	26,409	26,725	26,822
Employment by Industry:					
Agriculture, Forestry and Fishing	5.6	5.1	4.9	4.8	5.0
Mining and Manufacturing	17.3	17.6	17.2	17.2	16.9
S.O.C & Services	77.1	77.2	77.9	78.0	78.1
Electricity, Transport, Communication and Finance	11.8	11.8	11.8	11.4	11.8
Business, Private & Public Service and Other Services	35.3	35.4	36.3	36.4	36.5
Construction	7.1	7.0	7.0	7.4	7.6
Wholesale & Retail Trade, Hotels and Restaurants	23.0	23.0	22.9	22.8	22.2
Total Employed	100.0	100.0	100.0	100.0	100.0
Employment by Gender:					
Male	58.0	57.7	57.6	57.5	57.3
Female	42.0	42.3	42.4	42.5	42.7
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 July 1, 2018, the maximum working hours of employees has been and is 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 July 1, 2018, and it will be extended to workplaces with not fewer than 50 but fewer than 300 workers from January 1, 2020 and further extended to workplaces with not fewer than 5 but fewer than 50 workers from July 1, 2021.

Approximately 10.7% of the Republic's workers were unionized as of December 31, 2017. Labor unrest in connection with demands by unionized 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 November 2014, unionized workers at Hyundai Heavy Industries went on a series of partial strikes demanding higher wages.
- In April 2015, tens of thousands of members of the Korean Confederation of Trade Unions, which includes teacher and civil servant union groups, went on general strike demanding that the Government scrap its plans to reform the labor market and pension program for public workers.
- In September 2016, unionized subway and railroad workers launched a joint nationwide strike, the first in 22 years, demanding that the Government scrap its proposed merit pay system for subway and railroad workers.
- In October 2016, unionized workers at Hyundai Motor went on full strike, the first in 12 years, demanding higher wages, while unionized workers at Kia Motors Corporation ("Kia Motors") went on partial strike protesting the wage gap between workers at Kia Motors and workers at Hyundai Motor.
- In September 2017, several thousand unionized 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 labor practices.
- In 2017, unionized workers at Hyundai Motor went on a series of partial strikes demanding higher wages and bonuses.
- In July 2018, unionized workers at Hyundai Heavy Industries went on full strike demanding higher wages.

Actions such as these by labor unions may hinder implementation of the labor reform measures and disrupt the Government's plans to create a more flexible labor market. Although much effort is being expended to resolve labor disputes in a peaceful manner, there can be no assurance that further labor unrest will not occur in the future. Continued labor unrest in key industries of the Republic may have an adverse effect on the economy.

In 1997, the Korean Confederation of Trade Unions organized 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 ("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 April 13, 2016, the Justice Party won six seats in the National Assembly, and the members-elect began their four-year terms on May 30, 2016. As of December 31, 2018, the Justice Party holds five 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. To ease the liquidity crisis, the Government altered the real-name financial transactions system during 1998, to allow the sale or deposit of foreign currencies through domestic financial institutions and the purchase of certain bonds, including Government bonds, without identification. 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 (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 Business 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 categorizes 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, "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 specialized 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 December 31, 2018, there were six nationwide banks, six regional banks, two internet banks and 38 foreign banks with branches operating in the Republic.

Specialized banks meet the needs of specific sectors of the economy in accordance with Government policy; they are organized under, or chartered by, special laws. Specialized 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 specialized 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 ₩2,055 billion in 2015, ₩308 billion in 2016, ₩395 billion in 2017 and ₩170 billion in 2018. Taking into account these capital contributions, its total paid-in capital was ₩18,108 billion as of December 31, 2018.
- 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 ₩1,130 billion in 2015, ₩1,620 billion in 2016 and ₩1,417 billion in 2017. Taking into account these capital contributions, its total paid-in capital was ₩11,815 billion as of December 31, 2018.
- The Industrial Bank of Korea: the Government owned, directly and indirectly, 55.2% of its common shares and all of its preferred shares as of December 31, 2017. 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 2014, the Industrial Bank of Korea issued an aggregate of 3,022,240 new common shares to the Government for ₩36 billion in cash and the Government sold 49,009,880 common shares of the Industrial Bank of Korea for ₩675 billion in cash. In addition, in April 2014, the Industrial Bank of Korea disposed of 26,200,882 of its common shares held as treasury shares through an international offering for ₩294 billion. In 2015, the Industrial Bank of Korea issued an aggregate of 3,184,713 new common shares to the Government for ₩40 billion in cash. In March 2016, the Industrial Bank of Korea issued an aggregate of 3,576,857 new common shares to the Government for ₩40 billion in cash. Taking into account such transactions, the Government's total paid-in capital was ₩1,674 billion as of December 31, 2018.

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.

	Total Loans	Non-Performing Assets[(1)]	Percentage of Total
	(trillions of won)		(percentage)
December 31, 2014	1,557.9	24.2	1.6
December 31, 2015	1,664.3	30.0	1.8
December 31, 2016	1,732.9	24.6	1.4
December 31, 2017	1,775.9	21.1	1.2
December 31, 2018[(2)]	1,872.6	18.2	1.0

(1) Assets classified as substandard or below.

(2) Preliminary.

Source: Financial Supervisory Service.

In 2014, these banks posted an aggregate net profit of ₩6.8 trillion, compared to an aggregate net profit of ₩4.5 trillion in 2013, primarily due to decreased loan loss provisions. In 2015, these banks posted an aggregate net profit of ₩4.4 trillion, compared to an aggregate net profit of ₩6.8 trillion in 2014, primarily due to increased loan loss provisions. In 2016, these banks posted an aggregate net profit of ₩3.0 trillion, compared to an aggregate net profit of ₩4.4 trillion in 2015, primarily due to increased loan loss provisions. 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. Based on preliminary data, in 2018, these banks posted an aggregate net profit of ₩13.8 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.

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 cooperatives and postal savings;
- life insurance institutions; and
- credit card companies.

As of September 30, 2018, 79 mutual savings banks, 26 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 stabilization bonds, negotiable certificates of deposits, repurchase agreements and commercial paper.

Securities Markets

On January 27, 2005, the Korea Exchange was established pursuant to the now repealed Korea Securities and Futures Exchange 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 capitalizations of all listed companies are aggregated, subject to certain adjustments, and this aggregate is expressed as a percentage of the aggregate market capitalization of all listed companies as of the base date, January 4, 1980.

The following table shows the value of the Korea Composite Stock Price Index as of the dates indicated:

December 31, 2014	1,915.6
January 30, 2015	1,949.3
February 27, 2015	1,985.8
March 31, 2015	2,041.0
April 30, 2015	2,127.2
May 29, 2015	2,114.8
June 30, 2015	2,074.2
July 31, 2015	2,030.2
August 29, 2015	1,941.5
September 30, 2015	1,962.8
October 30, 2015	2,029.5
November 30, 2015	1,992.0
December 30, 2015	1,960.3
January 29, 2016	1,912.1
February 29, 2016	1,916.7
March 31, 2016	1,995.8
April 29, 2016	1,994.2
May 31, 2016	1,983.4
June 30, 2016	1,970.4
July 29, 2016	2,016.2
August 31, 2016	2,034.7
September 30, 2016	2,043.6
October 31, 2016	2,008.2
November 30, 2016	1,983.5
December 29, 2016	2,026.5
January 31, 2017	2,067.6
February 28, 2017	2,091.6
March 31, 2017	2,160.2
April 28, 2017	2,205.4
May 31, 2017	2,347.4
June 30, 2017	2,391.8
July 31, 2017	2,402.7
August 31, 2017	2,363.2
September 29, 2017	2,394.5
October 31, 2017	2,523.4
November 30, 2017	2,476.4
December 28, 2017	2,467.5
January 31, 2018	2,566.5
February 28, 2018	2,427.4
March 30, 2018	2,445.9
April 30, 2018	2,515.4
May 31, 2018	2,423.0
June 29, 2018	2,326.1
July 31, 2018	2,326.1
August 31, 2018	2,295.3
September 28, 2018	2,322.9
October 31, 2018	2,343.1
November 30, 2018	2,029.7
December 31, 2018	2,096.9
January 31, 2019	2,041.0
February 28, 2019	2,204.9
March 29, 2019	2,140.7
April 30, 2019	2,203.6
May 31, 2019	2,041.7
June 28, 2019	2,130.6
July 31, 2019	2,024.6

As liquidity and credit concerns and volatility in the global financial markets increased significantly since September 2008, there was a significant overall decline in the stock prices of Korean companies during the fourth quarter of 2008 and first half of 2009 and the index has fluctuated since then. The index was 1,938.4 on August 14, 2019.

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 stabilization.

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 October 9, 2008, The Bank of Korea cut its policy rate to 5.0% from 5.25%, and continued to lower it further to 4.25% on October 27, 2008, 4.0% on November 7, 2008, 3.0% on December 11, 2008, 2.5% on January 9, 2009 and 2.0% on February 12, 2009, in order to address financial market instability and to help combat the slowdown of the domestic economy. On July 9, 2010, The Bank of Korea raised the policy rate to 2.25% from 2.0%, which was further raised to 2.5% on November 16, 2010, in response to signs of inflationary pressures and the continued growth of domestic economy. On January 13, 2011, The Bank of Korea raised the policy rate to 2.75%, which was further increased to 3.0% on March 10, 2011 and to 3.25% on June 10, 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 July 12, 2012, which was further lowered to 2.75% on October 11, 2012, 2.5% on May 9, 2013, 2.25% on August 14, 2014, 2.0% on October 15, 2014, 1.75% on March 12, 2015, 1.5% on June 11, 2015 and 1.25% on June 9, 2016, in order to address the sluggishness of the global and domestic economy. On November 30, 2017, The Bank of Korea raised its policy rate to 1.5% from 1.25%, which was further raised to 1.75% on November 30, 2018, in response to signs of inflationary pressures and the continued growth of the global and domestic economy. On July 18, 2019, The Bank of Korea lowered its policy rate to 1.5% from 1.75%.

With the deregulation of interest rates on banks' demand deposits on February 2, 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:

	December 31,				
	2014	**2015**	**2016**	**2017**	**2018**
			(billions of Won)		
Money Supply (M1)(1)	585,822.6	708,452.9	795,531.1	849,862.4	865,851.8
Quasi-money(2)	1,491,411.4	1,538,922.1	1,611,928.0	1,680,491.2	1,834,510.6
Money Supply (M2)(3)	2,077,234.0	2,247,375.0	2,407,459.1	2,530,353.6	2,700,362.4
Percentage Increase Over Previous Year	8.1%	8.2%	7.1%	5.1%	6.7%

(1) Consists of currency in circulation and demand and instant access savings deposits at financial institutions.
(2) Includes time and installment 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

Authorized 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 authorized 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 liberalized:

- 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 minimize the adverse effects from further opening of the Korean capital markets, the Ministry of Economy and Finance is authorized 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 liberalization 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 liberalized. In line with the foregoing liberalization, measures will also be adopted to curb illegal foreign exchange transactions and to stabilize the foreign exchange market.

Effective as of January 1, 2006, the Government liberalized 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 July 2010, if a corporate investor, other than a financial institution or a public enterprise, wishes to enter into a foreign exchange forward, option or 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 foreign exchange forward, option or 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:

	Won/U.S. Dollar Exchange Rate
December 31, 2014	1,099.2
January 30, 2015	1,090.8
February 27, 2015	1,099.2
March 31, 2015	1,105.0
April 30, 2015	1,068.1
May 29, 2015	1,108.0
June 30, 2015	1,124.1
July 31, 2015	1,166.3
August 31, 2015	1,176.3
September 30, 2015	1,194.5
October 30, 2015	1,142.3
November 30, 2015	1,150.4

	Won/U.S. Dollar Exchange Rate
December 31, 2015	1,172.0
January 29, 2016	1,208.4
February 29, 2016	1,235.4
March 31, 2016	1,153.5
April 29, 2016	1,143.9
May 31, 2016	1,190.6
June 30, 2016	1,164.7
July 31, 2016	1,125.7
August 31, 2016	1,118.5
September 30, 2016	1,096.3
October 31, 2016	1,145.2
November 30, 2016	1,168.5
December 30, 2016	1,208.5
January 31, 2017	1,157.8
February 28, 2017	1,132.1
March 31, 2017	1,116.1
April 28, 2017	1,130.1
May 31, 2017	1,123.9
June 30, 2017	1,139.6
July 31, 2017	1,119.1
August 31, 2017	1,122.8
September 29, 2017	1,146.7
October 31, 2017	1,125.0
November 30, 2017	1,082.4
December 29, 2017	1,071.4
January 31, 2018	1,071.5
February 28, 2018	1,071.0
March 30, 2018	1,066.5
April 30, 2018	1,076.2
May 31, 2018	1,081.3
June 29, 2018	1,121.7
July 31, 2018	1,116.7
August 31, 2018	1,108.8
September 28, 2018	1,112.7
October 31, 2018	1,140.6
November 30, 2018	1,121.8
December 31, 2018	1,118.1
January 31, 2019	1,117.2
February 28, 2019	1,117.8
March 29, 2019	1,137.8
April 30, 2019	1,158.2
May 31, 2019	1,190.0
June 28, 2019	1,156.8
July 31, 2019	1,182.0

During the period from January 2, 2008 through April 16, 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. The market average exchange rate was ₩1,218.9 to US$1.00 on August 14, 2019.

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:

Balance of Payments[(1)]

Classification	2014	2015	2016	2017	2018[(4)]
			(millions of dollars)		
Current Account	83,029.6	105,118.6	97,923.7	75,230.9	76,408.5
Goods	86,145.0	120,275.0	116,461.7	113,592.9	111,866.6
Exports[(2)]	613,396.5	543,082.5	511,926.1	580,310.2	625,437.4
Imports[(2)]	527,251.5	422,807.5	395,464.4	466,717.3	513,570.8
Services	(3,290.1)	(14,625.8)	(17,338.4)	(36,734.1)	(29,737.1)
Income	5,159.4	4,454.6	4,567.1	5,336.9	2,777.7
Current Transfers	(4,984.7)	(4,985.2)	(5,766.7)	(6,964.8)	(8,498.7)
Capital and Financial Account	86,340.5	102,724.3	99,765.1	84,398.5	70,678.2
Capital Account	(8.9)	(60.2)	(46.2)	(26.8)	188.9
Financial Account[(3)]	86,349.4	102,784.5	99,811.3	84,425.3	70,489.3
Net Errors and Omissions	3,328.7	(2,273.9)	1,933.8	9.221.2	(6,108.1)

(1) Figures are prepared based on the sixth edition of Balance of Payment Manual, or BPM6, 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 2017 decreased to US$75.2 billion from the current account surplus of US$97.9 billion in 2016, primarily due to an increase in deficit from the service account. Based on preliminary data, the Republic recorded a current account surplus of approximately US$76.4 billion in 2018. The current account surplus in 2018 increased from the current account surplus of US$75.2 billion in 2017, primarily due to a decrease in deficit from the service account which more than offset decreases in surpluses from the current transfers account and the goods account.

Based on preliminary data, the Republic recorded a current account surplus of approximately US$21.8 billion in the first half of 2019. The current account surplus in the first half of 2019 decreased from the current account surplus of US$28.9 billion in the corresponding period of 2018, primarily due to a decrease in surplus from the goods account which more than offset a decrease in deficit from the service account.

Foreign Direct Investment

Since 1960, the Government has adopted a broad range of related laws, administrative rules and regulations, providing 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

	2014	2015	2016	2017	2018
			(billions of dollars)		
Contracted and Reported Investment					
Greenfield Investment[1]	11.0	14.1	15.0	15.7	20.0
Merger & Acquisition	8.0	6.8	6.3	7.2	6.9
Total	19.0	20.9	21.3	22.9	26.9
Actual Investment	12.2	16.6	10.8	13.6	17.0[2]

(1) Includes building new factories and operational facilities.

(2) Preliminary.

Source: Ministry of Trade, Industry and Energy.

In 2017, the contracted and reported amount of foreign direct investment in the Republic increased to US$22.9 billion from US$21.3 billion in 2016, primarily due to an increase in foreign investment in the manufacturing sector to US$7.2 billion in 2017 from US$5.0 billion in 2016, which more than offset a decrease in foreign investment in the electricity, gas and construction sector to US$0.3 billion in 2017 from US$0.7 billion in 2016.

In 2018, the contracted and reported amount of foreign direct investment in the Republic increased to US$26.9 billion from US$22.9 billion in 2017, primarily due to an increase in foreign investment in the manufacturing sector to US$10.0 billion in 2018 from US$7.2 billion in 2017.

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

	2014	2015	2016	2017	2018
	(billions of dollars)				
North America					
U.S.A.	3.6	5.5	3.9	4.7	5.9
Others	1.4	2.9	1.4	1.6	1.9
	5.0	8.4	5.3	6.3	7.8
Asia					
Japan	2.5	1.7	1.2	1.8	1.3
Hong Kong	1.1	1.5	2.1	1.8	1.5
Singapore	1.7	2.5	2.3	1.8	1.5
China	1.2	2.0	2.0	0.8	2.7
Others	0.3	0.7	0.5	2.0	2.4
	6.8	8.4	8.1	8.2	9.4
European Union					
Malta	0.4	0.7	4.1	1.1	2.6
Netherlands	2.4	0.5	1.5	1.7	1.4
England	0.4	0.3	0.4	2.2	1.2
Germany	0.2	0.5	0.3	0.7	0.5
France	0.2	0.1	0.2	0.3	0.7
Luxembourg	1.9	0.2	0.2	0.2	0.2
Others	1.2	0.4	0.8	1.1	2.4
	6.7	2.7	7.5	7.3	9.0
Others regions and countries	0.5	1.4	0.4	1.1	0.6
Total	19.0	20.9	21.3	22.9	26.9

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 summarizes the Republic's trade balance for the periods indicated:

Trade Balance

	Exports(1)	As % of GDP(2)	Imports(3)	As % of GDP(2)	Balance of Trade	Exports as % of Imports
		(billions of dollars, except percentages)				
2014	572.7	40.6%	525.5	37.2%	47.2	109.0
2015	526.8	38.1%	436.5	31.6%	90.3	120.7
2016	495.4	35.0%	406.2	28.7%	89.2	122.0
2017	573.7	37.5%	478.5	31.3%	95.2	119.9
2018(4)	604.9	37.3%	535.2	33.0%	69.7	113.0

(1) These entries are derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods include insurance and freight cost.

(2) At current market prices.

(3) These entries are derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods include insurance and freight cost.

(4) 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.

The following tables give information regarding the Republic's exports and imports by major commodity groups:

Exports by Major Commodity Groups (C.I.F.)(1)

	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017	As % of 2017 Total	2018(2)	As % of 2018 Total(2)
	(billions of dollars, except percentages)									
Foods & Consumer Goods	7.0	1.2	6.8	1.3	7.4	1.5	7.8	1.4	7.9	1.3
Raw Materials and Fuels	59.2	10.3	39.5	7.5	33.0	6.7	43.1	7.5	55.1	9.1
Petroleum & Derivatives	51.2	8.9	32.4	6.1	26.8	5.4	35.4	6.2	47.0	7.8
Others	8.0	1.4	7.1	1.3	6.2	1.3	7.7	1.3	8.1	1.3
Light Industrial Products	38.6	6.7	35.4	6.7	35.4	7.1	36.0	6.3	35.8	5.9
Heavy & Chemical Industrial Products	467.9	81.7	445.1	84.5	419.7	84.7	486.8	84.9	506.1	83.7
Electronic & Electronic Products	174.4	30.5	170.5	32.4	159.4	32.2	192.0	33.5	214.8	35.5
Chemicals & Chemical Products	65.6	11.5	55.9	10.6	55.3	11.2	65.7	11.5	74.0	12.2
Metal Goods	47.5	8.3	41.4	7.9	39.9	8.1	46.9	8.2	48.1	8.0
Machinery & Precision Equipment	57.9	10.1	57.3	10.9	55.2	11.1	63.3	11.0	69.4	11.5
Transport Equipment	116.5	20.3	112.8	21.4	101.0	20.4	108.8	19.0	87.4	14.4
Passenger Cars	44.8	7.8	41.7	7.9	37.5	7.6	38.8	6.8	38.2	6.3
Ship & Boat	38.7	6.8	38.8	7.4	33.5	6.8	41.4	7.2	20.7	3.4
Others	33.0	5.8	32.3	6.1	30.0	6.1	28.6	5.0	28.4	4.7
Others	6.0	1.0	7.2	1.4	8.9	1.8	10.1	1.8	12.5	2.1
Total	572.7	100.0	526.8	100.0	495.4	100.0	573.7	100.0	604.9	100.0

(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.)[(1)]

	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017	As % of 2017 Total	2018[(2)]	As % of 2018 Total[(2)]
	(billions of dollars, except percentages)									
Industrial Materials and Fuels	311.2	59.2	219.0	50.2	191.0	47.0	233.1	48.7	279.0	52.1
Crude Petroleum	94.9	18.1	55.1	12.6	44.3	10.9	59.6	12.5	80.4	15.0
Mineral	24.6	4.7	17.6	4.0	15.5	3.8	20.3	4.2	22.0	4.1
Chemicals	43.9	8.4	39.6	9.1	39.1	9.6	44.0	9.2	50.0	9.3
Iron & Steel Products	27.0	5.1	21.2	4.9	18.9	4.7	20.3	4.2	19.7	3.7
Non-ferrous Metal	12.8	2.4	11.6	2.7	10.7	2.6	12.1	2.5	12.8	2.4
Others	108.0	20.5	74.0	16.9	62.5	15.4	76.8	16.1	94.1	17.6
Capital Goods	149.0	28.3	150.8	34.5	147.8	36.4	171.8	35.9	174.6	32.6
Machinery & Precision Equipment	50.8	9.7	49.1	11.2	47.8	11.8	63.1	13.2	60.5	11.3
Electric & Electronic Machines	84.5	16.1	87.5	20.0	84.9	20.9	95.8	20.0	100.4	18.8
Transport Equipment	11.6	2.2	12.4	2.8	13.0	3.2	10.8	2.3	11.5	2.1
Others	2.1	0.4	1.9	0.4	2.1	0.5	2.1	0.4	2.2	0.4
Consumer Goods	65.3	12.4	66.7	15.3	67.4	16.6	73.6	15.4	81.6	15.2
Cereals	7.9	1.5	6.9	1.6	6.2	1.5	6.0	1.3	6.8	1.3
Goods for Direct Consumption	16.7	3.2	17.1	3.9	17.8	4.4	19.7	4.1	22.3	4.2
Consumer Durable Goods	24.7	4.7	26.6	6.1	27.0	6.6	30.0	6.3	32.2	6.0
Consumer Nondurable Goods	16.0	3.0	16.0	3.7	16.4	4.0	17.9	3.7	20.3	3.8
Total	525.5	100.0	436.5	100.0	406.2	100.0	478.5	100.0	535.2	100.0

(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 2014, the Republic recorded a trade surplus of US$47.2 billion. Exports increased by 2.3% to US$572.7 billion in 2014 from US$559.6 billion in 2013, primarily due to increased demand for semiconductors, wireless communication devices, iron and steel from the United States, the EU and the Southeast Asian nations. Imports increased by 1.9% to US$525.5 billion in 2014 from US$515.6 billion in 2013, primarily due to increased imports of cars, components for wireless communication devices and beef.

In 2015, the Republic recorded a trade surplus of US$90.3 billion in 2015. Exports decreased by 8.0% to US$526.8 billion in 2015 from US$572.7 billion in 2014, primarily due to adverse global economic conditions. Imports decreased by 16.9% to US$436.5 billion in 2015 from US$525.5 billion in 2014, primarily due to a decrease in oil prices, which also decreased unit prices of major raw materials.

In 2016, the Republic recorded a trade surplus of US$89.2 billion in 2016. Exports decreased by 6.0% to US$495.4 billion in 2016 from US$526.8 billion in 2015, primarily due to the continued slowdown of the global economy. Imports decreased by 6.9% to US$406.2 billion in 2016 from US$436.5 billion in 2015, primarily due to a continued decrease in oil prices, which also led to decreased unit prices of other major raw materials.

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.

Based on preliminary data, the Republic recorded a trade surplus of US$69.7 billion in 2018. 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.

Based on preliminary data, the Republic recorded a trade surplus of US$19.2 billion in the first half of 2019. Exports decreased by 8.6% to US$271.3 billion and imports decreased by 5.1% to US$252.1 billion from US$296.7 billion of exports and US$265.6 billion of imports, respectively, in the corresponding period of 2018.

The following table sets forth the Republic's exports trading partners:

Exports

	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017	As % of 2017 Total	2018(1)	As % of 2018 Total(1)
	(millions of dollars, except percentages)									
China	145,287.7	25.4	137,123.9	26.0	124,432.9	25.1	142,120.0	24.8	162,125.1	26.8
United States	70,284.9	12.3	69,832.1	13.3	66,462.3	13.4	68,609.7	12.0	72,719.9	12.0
Japan	32,183.8	5.6	25,576.5	4.9	24,355.0	4.9	26,816.1	4.7	30,528.6	5.0
Hong Kong	27,256.4	4.8	30,418.2	5.8	32,782.4	6.6	39,112.3	6.8	45,996.4	7.6
Singapore	23,749.9	4.1	15,011.2	2.8	12,458.9	2.5	11,651.9	2.0	11,782.2	1.9
Vietnam	22,351.7	3.9	27,770.8	5.3	32,630.5	6.6	47,753.8	8.3	48,622.1	8.0
Taiwan	15,077.4	2.6	12,004.3	2.3	12,220.5	2.5	14,898.4	2.6	20,783.5	3.4
India	12,782.5	2.2	12,029.6	2.3	11,596.3	2.3	15,055.5	2.6	15,606.2	2.6
Indonesia	11,360.7	2.0	7,872.4	1.5	6,608.5	1.3	8,403.7	1.5	8,833.2	1.5
Mexico	10,846.0	1.9	10,891.9	2.1	9,720.8	2.0	10,932.6	1.9	11,458.2	1.9
Australia	10,282.5	1.8	10,830.6	2.1	7,500.7	1.5	19,861.6	3.5	9,610.4	1.6
Russia	10,129.2	1.8	4,685.7	0.9	4,768.8	1.0	6,906.6	1.2	7,320.9	1.2
Germany	7,570.9	1.3	6,220.2	1.2	6,443.0	1.3	8,483.8	1.5	9,372.7	1.5
Others(2)	173,501.0	30.3	156,489.1	29.7	143,445.3	29.0	153,088.4	26.7	150,100.2	24.8
Total	572,664.6	100.0	526,756.5	100.0	495,425.9	100.0	573,694.4	100.0	604,859.7	100.0

(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

	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017	As % of 2017 Total	2018(1)	As % of 2018 Total(1)
	(millions of dollars, except percentages)									
China	90,082.2	17.1	90,250.3	20.7	86,980.1	19.9	97,860.1	20.5	106,488.6	19.9
Japan	53,768.3	10.2	45,853.8	10.5	47,466.6	10.9	55,124.7	11.5	54,603.7	10.2
United States	45,283.3	8.6	44,024.4	10.1	43,215.9	9.9	50,749.4	10.6	58,868.3	11.0
Saudi Arabia	36,694.5	7.0	19,561.5	4.5	15,741.7	3.6	19,590.5	4.1	26,335.8	4.9
Qatar	25,723.1	4.9	16,474.8	3.8	10,081.3	2.3	11,267.1	2.4	16,293.6	3.0
Australia	20,413.0	3.9	16,437.8	3.8	15,175.9	3.5	19,159.7	4.0	20,718.6	3.9
Germany	21,298.8	4.0	20,956.5	4.8	18,917.0	4.3	19,748.7	4.1	20,854.0	3.9
Kuwait	16,892.0	3.2	8,973.4	2.1	7,262.3	1.7	9,594.0	2.0	12,794.3	2.4
Taiwan	15,689.8	3.0	16,653.9	3.8	16,403.1	3.8	18,073.0	3.8	16,738.4	3.1
United Arab Emirates	16,194.3	3.1	8,614.7	2.0	6,941.1	1.6	9,557.1	2.0	9,287.4	1.7
Indonesia	12,266.3	2.3	8,850.4	2.0	8,285.3	1.9	9,571.0	2.0	11,161.2	2.1
Malaysia	11,097.9	2.1	8,609.4	2.0	7,507.8	1.7	8,714.7	1.8	10,205.7	1.9
Others(2)	160,111.0	30.5	131,238.1	30.1	122,214.8	34.9	149,468.3	31.2	170,852.9	31.9
Total	525,514.5	100.0	436,499.0	100.0	406,192.9	100.0	478,478.3	100.0	535,202.4	100.0

(1) Preliminary.
(2) Includes more than 200 countries and regions.
Source: The Bank of Korea; Korea Customs Service.

In the past, the outbreak of severe health epidemics in Korea and various parts of the world increased uncertainty about prospects for international trade and economic growth for affected countries, as well as world economic prospects in general. In response to these outbreaks, the Government issued advisories on disease prevention and conducted special monitoring. In May 2015, an outbreak of Middle East Respiratory Syndrome, or MERS, resulted in the death of over 30 people and the quarantine of thousands. The Government continues to cooperate with regional and international efforts to develop and implement additional measures to contain and prevent MERS and other diseases. Another outbreak of MERS or similar incidents in the future, however, may have an adverse effect on Korean and world economies and on international trade.

In recent years, the value of the Won relative to the U.S. dollar and Japanese Yen has fluctuated widely. 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 and Colombia since July 2016. In

March 2017, the Republic signed a regional FTA with each of Panama, Costa Rica, Guatemala, Honduras, El Salvador and Nicaragua. 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 and the European Union since 2011 and is currently negotiating additional regional FTAs, including one with China and Japan. The Republic and the United States have recently 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$4.5 billion in 2014, US$16.3 billion in 2015, US$19.7 billion in 2016 and US$38.4 billion in 2017. Based on preliminary data, the Republic had a non-commodities trade deficit of US$35.5 billion in 2018.

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

	December 31,				
	2014	2015	2016	2017	2018
	(millions of dollars)				
Gold	$ 4,794.7	$ 4,794.8	$ 4,794.8	$ 4,794.8	$ 4,794.8
Foreign Exchange(1)	353,600.5	358,513.8	361,701.4	379,476.6	393,332.5
Total Gold and Foreign Exchange	358,395.2	363,308.6	366,496.2	384,271.3	398,127.2
Reserve Position at IMF	1,917.1	1,411.8	1,727.5	1,621.1	2,140.4
Special Drawing Rights	3,280.5	3,241.4	2,878.0	3,374.3	3,426.6
Total Official Reserves	$363,592.7	$367,961.9	$371,101.6	$389,266.7	$403,694.3

(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 December 31, 2007 from US$8.9 billion as of December 31, 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 December 31, 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$363.6 billion as of December 31, 2014, US$368.0 billion as of December 31, 2015, US$371.1 billion as of December 31, 2016, US$389.3 billion as of December 31, 2017 and US$403.7 billion as of December 31, 2018, primarily due to continued trade surpluses and capital inflows. The amount of the Government's foreign currency reserve was US$403.1 billion as of July 31, 2019.

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 January 1. 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.

2017 budgeted revenues increased by 5.8% to ₩391.2 trillion from ₩369.9 trillion in 2016, led by an increase in budgeted tax revenues (including revenues from social security contributions, taxes on goods and services and taxes on income, profits and capital gains). 2017 budgeted expenditures and net lending increased by 2.9% to ₩378.2 trillion from ₩367.4 trillion in 2016, led by increases in budgeted expenditures on welfare services for senior citizens, children, unemployed people and temporary workers, military services, infrastructure and community development. The 2017 budget anticipated a ₩13.0 billion budget surplus.

2018 budgeted revenues increased by 6.4% to ₩416.1 trillion from ₩391.2 trillion in 2017, led by an increase in budgeted tax revenues (including revenues from social security contributions, taxes on goods and services and taxes on income, profits and capital gains). 2018 budgeted expenditures and net lending increased by 5.2% to ₩397.7 trillion from ₩378.2 trillion in 2017, led by increases in budgeted expenditures on the agriculture, forestry and fisheries industry, welfare services for senior citizens, children, unemployed people and temporary workers, health and medical services, education services and military services. The 2018 budget anticipated a ₩18.4 billion budget surplus.

2019 budgeted revenues increased by 7.3% to ₩446.4 trillion from ₩416.1 trillion in 2018, led by an increase in budgeted tax revenues (including taxes on income, profits and capital gains). 2019 budgeted expenditures and net lending increased by 10.6% to ₩439.9 trillion from ₩397.7 trillion in 2018, led by increases in budgeted expenditures on economic growth (including job creation and research and development), child care and education, welfare services for senior citizens, children, disabled people, unemployed people and temporary workers and military services. The 2019 budget anticipated a ₩6.5 billion budget surplus.

The following table shows consolidated Government revenues and expenditures:

Consolidated Central Government Revenues and Expenditures

	Actual					Budget		
	2014	2015	2016	2017	2018[1]	2017	2018	2019
	(billions of Won)							
Total Revenues	320,895	339,186	371,264	403,839	438,262	391,175	416,085	446,398
Current Revenues	318,185	335,911	367,888	400,659	435,558	387,376	413,304	443,271
Total Tax Revenues	255,313	270,974	299,451	325,845	358,424	313,086	337,402	364,539
Taxes on income, profits and capital gains	95,976	105,751	120,612	134,242	155,399	126,847	135,942	159,618
Social security contributions	49,793	53,089	56,889	60,460	64,854	62,010	69,273	69,747
Tax on property	9,054	11,113	11,112	12,945	15,473	11,459	11,931	14,611
Taxes on goods and services	79,055	79,442	89,221	95,535	99,056	90,282	97,390	97,263
Taxes on international trade and transaction	8,721	8,495	8,045	8,529	8,815	8,991	9,418	9,056
Other tax	12,715	13,084	13,571	14,133	14,828	13,498	13,450	14,244
Non-Tax Revenues	62,872	64,936	68,437	74,814	77,134	74,290	75,902	78,732
Operating surpluses of departmental enterprise sales and property income	23,112	22,129	24,489	27,692	28,616	26,981	27,154	28,692
Administration fees & charges and non-industrial sales	7,997	8,664	8,469	9,067	9,004	8,978	9,460	9,940
Fines and forfeits	19,556	20,777	22,266	23,769	24,455	22,879	23,140	23,726
Contributions to government employee pension fund	9,915	10,929	11,289	12,311	13,206	12,370	13,200	6,476
Current revenue of non-financial public enterprises	2,292	2,437	1,924	1,974	1,853	3,082	2,947	2,929
Capital Revenues	2,710	3,276	3,376	3,180	2,703	3,800	2,781	3,127
Total Expenditures and Net Lending	312,394	339,351	354,354	379,809	407,099	378,196	397,739	439,868
Total Expenditures	311,507	330,537	342,612	363,671	389,610	367,705	388,134	425,270
Current Expenditures	280,466	296,216	309,981	332,719	360,176	336,209	358,912	394,567
Expenditure on goods and service	59,616	63,160	65,145	67,536	71,459	71,542	75,281	80,219
Interest payment	14,057	14,056	13,964	13,976	14,287	14,486	14,334	14,362
Subsidies and other current transfers	203,649	216,189	228,349	248,513	272,080	246,987	265,631	295,970
Current expenditure of non-financial public enterprises	3,143	2,810	2,524	2,694	2,350	3,193	3,666	4,016
Capital Expenditures	31,041	34,322	32,631	30,952	29,434	31,496	29,222	30,704
Net Lending	888	8,814	11,741	16,138	17,489	10,490	9,605	14,597

(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 organizations 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 labor, 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 defense, community service, education, health, social security, certain annuities and pensions and local finance, which involves the transfer of tax revenues to local governments.

For 2014, the Republic recorded total revenues of ₩320.9 trillion and total expenditures and net lending of ₩312.4 trillion. The Republic had a fiscal surplus of ₩8.5 trillion in 2014.

For 2015, the Republic recorded total revenues of ₩339.2 trillion and total expenditures and net lending of ₩339.4 trillion. The Republic had a fiscal deficit of ₩0.2 trillion in 2015.

For 2016, the Republic recorded total revenues of ₩371.3 trillion and total expenditures and net lending of ₩354.4 trillion. The Republic had a fiscal surplus of ₩16.9 trillion in 2016.

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.

Based on preliminary data, the Republic recorded total revenues of ₩438.3 trillion and total expenditures and net lending of ₩407.1 trillion in 2018. The Republic had a fiscal surplus of ₩31.2 trillion in 2018.

Debt

The Government estimates that the total outstanding debt of the Government (including guarantees by the Government) as of December 31, 2017 amounted to approximately ₩648.5 trillion, an increase of 5.3% over the previous year. The Government estimates that the total outstanding debt of the Government (including guarantees by the Government) as of December 31, 2018 amounted to approximately ₩680.7 trillion, an increase of 5.0% over the previous year. 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 December 31, 2018:

Direct External Debt of the Government

	Amount in Original Currency	Equivalent Amount in U.S. Dollars(1)
	(millions)	
US$	US$5,900.0	US$5,900.0
Euro (EUR)	EUR1,125.0	1,287.1
Total		US$7,187.1

(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 December 31, 2018.

The following table summarizes, as of December 31 of the years indicated, the outstanding direct internal debt of the Republic:

Direct Internal Debt of the Government

	(billions of Won)
2014	493,584.9
2015	547,625.6
2016	584,785.0
2017	619,971.9
2018	643,550.9

The following table sets out all guarantees by the Government of indebtedness of others:

Guarantees by the Government

	December 31,				
	2014	2015	2016	2017	2018
	(billions of Won)				
Domestic	29,158.4	26,393.8	24,241.6	21,130.5	17,016.3
External(1)	—	—	—	—	—
Total	29,158.4	26,393.8	24,241.6	21,130.5	17,016.3

(1) Converted to Won at foreign exchange banks' telegraphed transfer selling rates to customers or the market average exchange rates in effect on December 31 of each year.

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 Balance of Payment Manual, or BPM6, published by the International Monetary Fund in December 2010 and implemented by the Government in December 2013. Under BPM6, in particular, prepayments received in connection with the construction of ships are excluded from the external liabilities.

	December 31,				
	2014	2015	2016	2017	2018[(1)]
	(billions of dollars)				
Long-term Liabilities	307.9	291.7	277.4	296.1	314.0
General Government	65.2	62.8	64.5	78.0	83.5
Monetary Authorities	25.9	20.1	10.8	14.5	15.2
Banks	104.0	103.1	93.8	91.7	100.3
Other Sectors	112.9	105.7	108.2	111.8	115.1
Short-term Liabilities	116.4	104.3	104.8	116.0	126.6
General Government	1.8	2.3	2.5	2.0	1.0
Monetary Authorities	12.2	12.0	6.9	8.1	12.8
Banks	79.9	74.8	78.4	85.5	90.3
Other Sectors	22.5	15.2	17.0	20.4	22.5
Total External Liabilities	424.3	396.1	382.2	412.0	440.6

(1) Preliminary.

Debt Record

The Government has always paid when due the full amount of principal of, interest on, and amortization of sinking fund requirements of, all of its indebtedness.

TAXATION

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 establishments in Korea are taxed in accordance with different rules.

Tax on Interest

Interest on the Notes paid to Non-Residents, being foreign currency denominated bonds issued outside of Korea, is exempt from individual and corporate income tax (whether payable by withholding or otherwise) pursuant to the Special Tax Treatment Control Law (the "**STTCL**").

If the tax exemption under the STTCL referred to above were to cease to be in effect, the rate of income tax or corporation tax applicable to interest on the Notes, for a Non-Resident without a permanent establishment in Korea, would be 14 per cent. of income. In addition, a tax surcharge called a local income tax would be imposed at the rate of 10 per cent. of the income or corporation tax (raising the total tax rate to 15.4 per cent.).

The tax rates may be reduced by an applicable tax treaty, convention or agreement between Korea and the country of the recipient of the income.

In order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder must submit an application for reduced rate to the party liable for the withholding before the receipt of the relevant interest payment (if there is no change in the contents of such application, it is not required to submit such application again within 3 years thereafter), together with a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident's resident country. If the Non-Resident holder was unable to receive the benefit of a reduced rate due to his or her failure to timely submit the aforementioned application, the Non-Resident holder may still receive a tax treaty benefit by submitting evidentiary documents to the relevant tax office within 5 years thereafter. If interest is paid to an overseas investment vehicle, the overseas investment vehicle (subject to certain exceptions) must submit a report of overseas investment vehicle and a schedule of beneficial owners. The foregoing matter is discussed in more detail below.

Capital Gains Tax

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 (other than to their permanent establishments in Korea). In addition, capital gains earned by Non-Residents from the transfer of the 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 an overseas issuance and is denominated in a foreign currency under the STTCL.

If the exclusion or exemption from Korean taxation referred to above were to cease to be in effect, in the absence of an applicable treaty reducing or eliminating tax on capital gains, the applicable rate of tax would be the lower of 11 per cent. (including local income tax) of the gross realization proceeds or (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Note) 22 per cent. (including local income tax) of the realized gain (i.e., the excess of the gross realization proceeds over the acquisition cost and certain direct transaction costs) made. If such evidence shows that no gain (or a loss) was made on the sale, no Korean tax is payable. There is no provision under relevant Korean tax law to allow offsetting of gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of Notes issued by Korean companies.

The purchaser or any other designated withholding agent of Notes is obliged under Korean law to withhold the applicable amount of Korean tax and make payment thereof to the relevant Korean tax authority. Unless the seller can claim the benefit of an exemption from tax under an applicable tax treaty and on the failure of the seller to produce satisfactory evidence of his acquisition cost and certain direct transaction costs in relation to the Notes being sold, the purchaser or such withholding agent must withhold an amount equal to 11 per cent. (including local income tax) of the gross realization proceeds. The purchaser or withholding agent must pay any withholding tax to the competent Korean tax office no later than the tenth day of the month following the month in which the payment for the purchase of the relevant Notes occurred. Failure to transmit the withheld tax to the Korean tax authorities in time subjects the purchaser or such withholding agent to penalties under Korean tax laws. The Korean tax authorities may attempt to collect such tax from a Non-Resident who is liable for payment of any Korean tax on gains, as a purchaser or withholding agent who is obliged to withhold such tax, through proceedings against payments due to the Non-Resident from its Korean investments and the assets or revenues of any of the Non-Resident's branch or representative offices in Korea.

Withholding and Gross Up under the Guarantee

According to a recent tax ruling of Korea, interest on foreign currency denominated notes issued outside of Korea paid by a guarantor to a Non- Resident holder of notes is exempt from Korean withholding. However, if the tax ruling were to cease to be effect, all payments, other than the payment of the principal amount, under the Guarantee by the Guarantor to a Non- Resident holder of the Notes may be subject to withholding tax at the rate of 15.4% (including local income tax) or such reduced rate or non-taxation (tax exemption) as applicable under the relevant tax treaty between Korea and the residence country of the beneficial owner of the income. If payment of any interest on the Notes under the Guarantee by the Guarantor to a Non-Resident holder of the Notes is subject to withholding tax in Korea, the Guarantor will be required to pay such additional amounts, in accordance with the terms of the Notes, as may be necessary to ensure that such holder receives the amounts guaranteed under the Guarantee that would otherwise have been receivable in the absence of such deduction or withholding, subject to certain exceptions.

Inheritance Tax and Gift Tax

Korean inheritance tax is imposed upon (a) all assets (wherever located) of the deceased if at the time of his death he was a Korean resident and (b) all property located in Korea that passes on death (irrespective of 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 rate varies from 10 per cent. to 50 per cent. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under Korean inheritance and gift tax laws, bonds 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. Prospective purchasers should consult their personal tax advisors regarding the consequences of the imposition of the Korean inheritance or gift tax.

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 which will be paid by the Issuer. A securities transaction tax will not be imposed on the transfer of the Notes.

Tax Treaties

At the date of this Offering Circular, Korea has tax treaties with, *inter alia*, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, the United Kingdom, the United States of America and etc., under which the rate of withholding tax on interest is reduced, generally to between 10 and 15 per cent. (including local income tax), and the tax on capital gains is often eliminated.

A special withholding tax system took effect on July 1, 2006. Under the system, there is a special procedure to apply the Korea-Malaysia tax treaty on certain Korean source income. Payments made to the residents of Labuan, Malaysia will be subject to the default Korean withholding tax rates (generally 15.4 per cent. for interest and the lower of 11 per cent. of gross realization proceeds or 22 per cent. of capital gains (including local income tax)) rather than the reduced or exempted rate available under the Korea Malaysia tax treaty. A Labuan taxpayer, however, will be given an opportunity to obtain a refund by proving that it is entitled to the tax treaty benefits as a beneficial owner of the income and is an actual resident of Labuan, Malaysia. A Labuan taxpayer may also file an application with the National Tax Service (the "**NTS**") for confirmation that it is entitled to the tax treaty benefits and obtain an advance confirmation from the NTS prior to receiving Korean source income.

In order for a Non-Resident to obtain the benefit of a tax exemption on certain Korean source incomes, such as interest and capital gains, under an applicable tax treaty, Korean tax law requires such Non-Resident (or its agents) to submit to the payer of such Korean source income an application for tax exemption under a tax treaty 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. The payer of such Korean source income, in turn, is required to submit such application to the relevant district tax office by the ninth day of the month following the date of the first payment of such income. An application for tax exemption submitted by a Non-Resident remains effective for three years from submission, and if any material changes occur with respect to information provided in the application, an application reflecting such change must be newly submitted.

If the Korean source incomes are paid to Non-Residents through an overseas investment vehicle, such investment vehicle must obtain an application for tax exemption from each Non-Resident, who are the beneficial owners of the Korean source income and submit to the payer of such Korean source income an overseas investment vehicle report, together with the applications for tax exemption prepared by the Non-Resident beneficial owners. An overseas investment vehicle means an organization established outside of Korea that manages funds collected through investment solicitation by way of acquiring, disposing of, or otherwise investing in investment targets and distributes the outcome of such management to investors.

However, this requirement does not apply to exemptions under Korean tax law.

At present, Korea has not entered into any tax treaties regarding its inheritance or gift tax.

EU Savings Directive

Under Council Directive 2003/48/EC on the taxation of savings income (the "**Savings Directive**"), each Member State of the European Union is required to provide to the tax authorities of another such Member State details of payments of interest or other similar income paid by a person within its jurisdiction to, or secured by such a person for, an individual beneficial owner resident in, or certain limited types of entity established in, that other Member State. However, for a transitional period, Austria will (unless during such period it elects otherwise) instead operate a withholding system in relation to such payments. The rate of withholding is 35%. However, the beneficial owner of the interest (or similar income) payment may elect that certain provision of information procedures should be applied instead of withholding, provided that certain conditions are met. The transitional period is to terminate at the end of the first full fiscal year following agreement by certain non-EU countries to exchange of information procedures relating to interest and other similar income.

A number of non-EU countries and certain dependent or associated territories of certain Member States have adopted similar measures to the Savings Directive.

The Council of the European Union has adopted a directive amending the Savings Directive (the "**Amending Directive**") which, if implemented, would broaden the Savings Directive's scope. The Member States will have until January 1, 2016 to adopt national legislation necessary to comply with the Amending Directive, which legislation must apply from January 1, 2017. The changes made under the Amending Directive include extending the scope of the Savings Directive to payments made to, or secured for, certain other entities and legal arrangements (including certain trusts and partnerships), where certain conditions are satisfied. They also broaden the definition of "interest payment" to cover certain additional types of income.

However, the European Commission has proposed the repeal of the Savings Directive from January 1, 2017 in the case of Austria and from January 1, 2016 in the case of all other Member States (subject to on-going requirements to fulfill administrative obligations such as the reporting and exchange of information relating to, and accounting for withholding taxes on, payments made before those dates). This is to prevent overlap between the Savings Directive and a new automatic exchange of information regime to be implemented under Council Directive 2011/16/EU on Administrative Cooperation in the field of Taxation (as amended by Council Directive 2014/107/EU). The proposal also provides that, if it proceeds, Member States will not be required to apply the new requirements of the Amending Directive. Investors who are in any doubt as to their position should consult their professional advisers.

If a payment under the Notes were to be made and an amount of, or in respect of, tax were to be withheld from that payment pursuant to the Savings Directive (as amended from time to time) or any law implementing or complying with, or introduced in order to conform to, such Savings Directive, neither the Issuer, nor the Guarantor, nor any other person would be obliged to pay additional amounts under the terms of the Notes as a result of the imposition of such withholding tax. The Issuer is required to maintain a Paying Agent that is not obliged to withhold or deduct tax pursuant to the Savings Directive (as amended from time to time) or any law implementing or complying with, or introduced in order to conform to, such Savings Directive.

The Proposed Financial Transactions Tax

The European Commission has published a proposal (the "**Commission's Proposal**") for a Directive for a common financial transactions tax ("**FTT**") in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovenia, Slovakia and Spain (the "**participating Member States**").

The Commission's Proposal has very broad scope and could, if introduced in its current form, apply to certain dealings in the Notes (including secondary market transactions) in certain circumstances. The issuance and subscription of the Notes should, however, be exempt.

Under the Commission's Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

The FTT remains subject to negotiation between the participating Member States and the legality of the proposal is uncertain. It may therefore be altered prior to any implementation. Additional EU Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

Joint statements issued by several participating Member States indicate an intention to implement the FTT by January 1, 2016.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

SUBSCRIPTION AND SALE

Credit Suisse (Hong Kong) Limited, The Korea Development Bank and UBS AG Hong Kong Branch (the "**Managers**") have, pursuant to a Subscription Agreement (the "**Subscription Agreement**") dated August 28, 2019, agreed to subscribe and pay for, or to procure subscriptions and payment for, the principal amount of the Notes subject to certain conditions contained therein.

The Issuer will also reimburse the Managers in respect of certain of their expenses, and the Issuer and the Guarantor have agreed to indemnify the Managers against certain liabilities (including liabilities under the Securities Act), incurred in connection with the issue and sale of the Notes. The Subscription Agreement may be terminated in certain circumstances prior to payment of the issue price to the Issuer.

The initial issue price is set forth on the cover of this Offering Circular. After the Notes are released for sale, the Managers may change the issue price and other selling terms. The offering of the Notes by the Managers is subject to receipt and acceptance and subject to the Managers' right to reject any order in whole or in part.

The Managers and certain of their affiliates have, from time to time, performed, and may in the future perform, certain investment banking, commercial banking and advisory services for the Issuer, the Guarantor and/or their respective affiliates for which they have received or will receive customary fees and expenses.

The Managers and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. In the ordinary course of their various business activities, the Managers and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and instruments of the Issuer and the Guarantor.

The Managers or their affiliates may subscribe the Notes for their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to the Notes and/ or other securities of the Issuer, the Guarantor or their respective subsidiaries or associates at the same time as the offer and sale of the 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 the Notes to which this Offering Circular relates (notwithstanding that such selected counterparties may also be subscribers of the Notes).

Selling Restrictions

The Managers have agreed that they will (to the best of their knowledge and belief) comply with all applicable securities laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers the Notes or possesses or distributes this Offering Circular and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of the 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 the Managers shall have any responsibility therefor.

If a jurisdiction requires that any offering of the Notes 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 such dealer or such affiliate on behalf of the Issuer in such jurisdiction.

United States

The Notes and the Guarantee have not been and will not be registered under 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 ("**Regulation S**").

Each Manager has agreed that, except as permitted by the Subscription Agreement, it will not offer or sell the Notes and the Guarantee (i) as part of their distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the offering and the Closing Date, within the United States or to, or for the account or benefit of, U.S. persons, and it will have sent to each dealer to which it sells the Notes and the Guarantee during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Notes and the Guarantee 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.

The Notes and the Guarantee are being offered and sold outside of the United States to non-U.S. persons in reliance on Regulation S.

In addition, until 40 days after the commencement of the offering of the Notes and the Guarantee, an offer or sale of the Notes and the Guarantee within the United States by a dealer that is not participating in the offering may violate the registration requirements of the Securities Act.

United Kingdom

Each Manager has represented and agreed 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 Financial Services and Markets Act 2000 (the "**FSMA**")) received by it in connection with the issue or sale of the Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer or the Guarantor; 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 the Notes in, from or otherwise involving the United Kingdom.

Hong Kong

Each Manager has represented and agreed 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 and any rules made under that Ordinance; 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 or which do not constitute an offer to the public within the meaning of that Ordinance; 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 Securities and Futures Ordinance and any rules made under that Ordinance.

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

Manager 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 organized under the laws of Japan) or to others for re-offering or re-sale, 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.

Singapore

This Offering Circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**"). Accordingly, this Offering Circular and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes may not be circulated or distributed, nor may the Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor under Section 274 of the SFA; (ii) to a relevant person 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 and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the 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 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 defined in Section 275(2) of the SFA or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) 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 of Singapore.

Korea

The Notes have not been and will not be registered with the FSC under the FSCMA. Accordingly, the Notes have not been and will 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 defined in the Foreign Exchange Transactions Act of Korea and the regulations thereunder) or to others for re-offering or resale, except as otherwise permitted by applicable Korean laws and regulations. In addition, within one year following the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a qualified institutional buyer (or a "**Korean QIB**," as defined in the Regulation on Issuance, Public Disclosure, etc. of Securities of Korea) registered with the Korea Financial

Investment Association (the "**KOFIA**") for Korean QIB bond trading, provided that the amount of the Notes acquired by such Korean QIBs in the primary market is limited to no more than 20% of the aggregate issue amount of the Notes.

Transfer Restrictions

Because of the following restrictions, purchasers are advised to consult with legal counsel prior to making any offer, resale, pledge or other transfers of the Notes.

Transfer Restrictions under Korean Law

Each purchaser of the Notes, by accepting delivery of this Offering Circular, will be deemed to have acknowledged and represented and agreed as follows:

(a) The Notes have not been and will not be registered with the Financial Services Commission under the FSCMA. Accordingly, the Notes have not been and will 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 defined in the Foreign Exchange Transactions Law of Korea and the regulations thereunder) or to others for re-offering or resale, except as otherwise permitted by applicable Korean laws and regulations. In addition, within one year following the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a Korean QIB registered with the KOFIA for Korean QIB bond trading, provided that the amount of the Notes acquired by such Korean QIBs in the primary market is limited to no more than 20% of the aggregate issue amount of the Notes.

(b) The Notes will bear legends to the effect described in paragraph (a) above.

Other Transfer Restrictions Applicable to the Notes

The Notes and the Guarantee have not been and will not be registered under the Securities Act. The Securities and the Guarantee may not be offered or sold to any person in the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

Except in certain limited circumstances, interests in the Notes may only be held through interests in the Global Certificates. Such interests in the Global Certificates will be shown on, and transfers thereof will be effected only through, records maintained by Euroclear, Clearstream and their respective direct and indirect participants. See "*Terms and Conditions of the Notes*."

Each purchaser of the Notes, by accepting delivery of this Offering Circular, will be deemed to have acknowledged and represented and agreed as follows:

(a) The Notes and the Guarantee have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state of the United States or any other jurisdiction and are subject to significant restrictions on transfer.

(b) Until forty (40) days after the commencement of offering of the Notes, an offer or sale of the Notes and the Guarantee within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act.

(c) Such purchaser will not offer, sell, pledge or otherwise transfer any interest in the Notes or the Guarantee except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

(d) The Notes will bear legends to the following effect, unless the Issuer determines otherwise in compliance with applicable law, and such purchaser will observe the restrictions contained therein:

THE NOTES EVIDENCED HEREBY (THE "NOTES") OF KOREAN AIR LINES CO, LTD. (THE "ISSUER") HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT").

PRIOR TO THE EXPIRATION OF 40 DAYS AFTER THE LATER OF THE COMMENCEMENT OF THE OFFERING OF THE NOTES AND THE LATEST CLOSING DATE (THE "DISTRIBUTION COMPLIANCE PERIOD"), THE NOTES MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED TO ANY U.S. PERSON OUTSIDE THE UNITED STATES OR ANY PERSON IN THE UNITED STATES. EACH HOLDER AND BENEFICIAL OWNER, BY ITS ACCEPTANCE OF THE NOTES EVIDENCED HEREBY, REPRESENTS THAT IT UNDERSTANDS AND AGREES TO THE FOREGOING AND FOLLOWING RESTRICTIONS.

THE FOREGOING PARAGRAPH WILL BE NO LONGER EFFECTIVE AFTER THE END OF THE DISTRIBUTION COMPLIANCE PERIOD WITH RESPECT TO THE NOTES, AFTER WHICH THE NOTES EVIDENCED HEREBY WILL NO LONGER BE SUBJECT TO THE RESTRICTIONS SET FORTH THEREIN, PROVIDED THAT AT SUCH TIME AND THEREAFTER THE OFFER OR SALE OF THE NOTES EVIDENCED HEREBY WOULD NOT BE RESTRICTED UNDER ANY APPLICABLE SECURITIES LAWS OF THE UNITED STATES OR OF THE STATES OR TERRITORIES OF THE UNITED STATES.

THE NOTES HAVE NOT BEEN REGISTERED UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA (THE "FSCMA"). 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 IN THE FOREIGN EXCHANGE TRANSACTIONS LAW OF KOREA AND THE REGULATIONS THEREUNDER), FOR A PERIOD OF ONE YEAR FROM THE ISSUANCE OF THE NOTES, EXCEPT (I) WHERE RELEVANT REQUIREMENTS ARE SATISFIED, THE NOTES MAY BE OFFERED, SOLD OR DELIVERED TO OR FOR THE ACCOUNT OR BENEFIT OF A KOREAN RESIDENT THAT FALLS WITHIN CERTAIN CATEGORIES OF PROFESSIONAL INVESTORS AS SPECIFIED IN THE FSCMA, ITS ENFORCEMENT DECREE AND THE REGULATION ON ISSUANCE, PUBLIC DISCLOSURE, ETC. OF SECURITIES OF KOREA, OR (II) AS OTHERWISE PERMITTED UNDER APPLICABLE KOREAN LAWS AND REGULATIONS.

LEGAL MATTERS

Certain legal matters relating to the issue and sale of the Notes will be passed upon for the Issuer by Lee & Ko as to matters of Korean law, for the Guarantor by Cleary Gottlieb Steen & Hamilton LLP as to matters of New York law and by Lee & Ko as to matters of Korean law, and for the Managers by Linklaters LLP as matters of New York law. Lee & Ko may rely as to all matters of New York law on the opinion of Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP, and Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP may rely as to all matters of Korean law on the opinion of Lee & Ko.

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Consolidated Financial Statements of the Issuer

Consolidated Interim Financial Statements of the Issuer as of and for the Three Months ended March 31, 2019 and 2018

Consolidated Financial Statements of the Issuer as of and for the Years ended December 31, 2018 and 2017

Separate Financial Statements of the Guarantor

Separate Financial Statements of the Guarantor as of and for the Years ended December 31, 2018 and 2017

Report on Review of Interim Financial Statements

(English Translation of a Report Originally Issued in Korean)

To the Shareholders and Board of Directors of
Korean Air Lines Co., Ltd.

Reviewed Financial Statements

We have reviewed the accompanying consolidated interim financial statements of Korean Air Lines Co., Ltd. and its subsidiaries (collectively referred to as the "Group"). These financial statements consist of the consolidated interim statements of financial position of the Group as of March 31, 2019, and the related consolidated interim statements of comprehensive income (loss), changes in equity and cash flows for the three-month period ended March 31, 2019, and a summary of significant accounting policies and other explanatory notes, expressed in Korean won.

Management's Responsibility for the Consolidated interim Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated interim financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS") 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of consolidated interim financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to issue a report on these consolidated interim financial statements based on our review.

We conducted our review in accordance with quarterly or semi-annual review standards established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Samil PricewaterhouseCoopers, 100 Hangang-daero, Yongsan-gu, Seoul 04386, Korea, www.samil.com

Conclusion

Based on our review, nothing has come to our attention that causes us to believe the accompanying consolidated interim financial statements are not presented fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

Other Matters

The accompanying consolidated interim financial statements as of March 31, 2019 and December 31, 2018 and for the three-month period ended March 31, 2019 and 2018, have been translated into US dollars solely for the convenience of the reader and have been translated on the basis set forth in Note 2 to the consolidated interim financial statements.

The consolidated interim statements of comprehensive income (loss), changes in equity and cash flows for the three-month period ended March 31, 2018, presented herein for comparative purposes, were reviewed by another auditor whose report dated May 15, 2018. Based on their review, nothing has come to their attention that causes them to believe the accompanying consolidated interim financial statements do not present fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

The consolidated financial statements of the Group for the year ended December 31, 2018, were audited by another auditor who expressed an unqualified opinion on those statements, not presented herein, on March 19, 2019. The consolidated statement of financial position as of December 31, 2018, presented herein for comparative purposes, is consistent, in all material respects, with the above audited statement of financial position as of December 31, 2018.

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

Samil PricewaterhouseCoopers

May 15, 2019
Seoul, Korea

This report is effective as of May 15, 2019, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Financial Position
March 31, 2019 and December 31, 2018

(in millions of Korean won and thousands of US dollars)

	Notes	Korean Won		Translation into US dollars (Note 2)	
		March 31, 2019 (Unaudited)	December 31, 2018	March 31, 2019 (Unaudited)	December 31, 2018 (Unaudited)
Assets					
Current assets					
Cash and cash equivalents	5,6,21	₩ 1,543,764	₩ 1,503,951	$ 1,356,797	$ 1,321,806
Short-term financial instruments	6	195,961	236,731	172,228	208,060
Current portion of finance lease receivables	11,16	84,416	29,634	74,192	26,045
Trade and other receivables	7,41	893,045	844,155	784,888	741,919
Amount due from customers for contract work	32	32,129	39,175	28,238	34,430
Current portion of financial assets at amortized cost		38	35	33	31
Current portion of financial derivative assets	26	4,699	1,065	4,130	936
Inventories	10	969,668	1,030,116	852,231	905,358
Current tax assets		1,490	220	1,310	193
Other current assets	19	208,961	175,244	183,654	154,020
Other financial assets	9	10	10	9	9
Assets held for sale	44	12,037	12,037	10,579	10,579
		3,946,218	3,872,373	3,468,289	3,403,386
Non-current assets					
Long-term financial instruments	6	1,573	1,653	1,383	1,453
Long-term trade and other receivables	7	43	40	38	35
Financial assets at fair value	6,8,40	178,700	169,933	157,057	149,352
Financial assets at amortized cost	6,40	288	291	254	256
Finance lease receivables	11	295,822	99,329	259,995	87,299
Financial derivative assets	26	21,473	12,956	18,872	11,387
Investments in associates	13	7,119	6,759	6,257	5,940
Property, aircraft and equipment	2,15,16	20,932,946	19,648,002	18,397,738	17,268,414
Investments in properties	16,17	334,519	330,060	294,005	290,086
Intangible assets	16,18	293,786	300,762	258,205	264,336
Other financial assets	9,40	208,937	210,852	183,632	185,316
Deferred tax assets		828,741	823,676	728,371	723,920
Other non-current assets	19	107,061	102,967	94,095	90,496
		23,211,008	21,707,280	20,399,902	19,078,290
Total assets		₩ 27,157,226	₩ 25,579,653	$ 23,868,191	$ 22,481,676

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Financial Position
March 31, 2019 and December 31, 2018

(in millions of Korean won and thousands of US dollars)

	Notes	Korean Won		Translation into US dollars (Note 2)	
		March 31, 2019 (Unaudited)	December 31, 2018	March 31, 2019 (Unaudited)	December 31, 2018 (Unaudited)
Liabilities					
Current liabilities					
Trade and other payables	20,41	₩ 946,940	₩ 947,806	$ 832,255	$ 833,016
Short-term borrowings	16,21	684,280	732,311	601,406	643,620
Current portion of long-term borrowings	6,16,21,41	2,490,791	2,423,309	2,189,129	2,129,820
Current portion of finance lease obligations	16,22	1,504,294	1,165,558	1,322,108	1,024,396
Current portion of financial derivative liabilities	26	1,136	5,283	998	4,643
Current portion of provisions	24	43,138	37,148	37,914	32,649
Current portion of deferred revenue	25	386,365	422,396	339,572	371,239
Amount due to customers for contract work	32	2,946	3,379	2,589	2,970
Current tax liabilities		2,635	2,326	2,316	2,044
Other current liabilities	27	1,919,424	1,782,347	1,686,961	1,566,485
		7,981,949	7,521,863	7,015,248	6,610,882
Non-current liabilities					
Long-term trade and other payables	20,41	19,515	21,323	17,152	18,741
Long-term borrowings	16,21	2,164,431	2,373,633	1,902,295	2,086,160
Debentures	21	1,825,181	1,518,959	1,604,132	1,334,996
Assetbacked securitization loans	6,21,41	1,042,984	1,204,382	916,667	1,058,518
Finance lease obligations	2,16,22	7,569,672	6,321,047	6,652,902	5,555,499
Net defined benefit liabilities	23	1,513,198	1,493,987	1,329,933	1,313,049
Provisions	24	153,760	148,646	135,138	130,643
Deferred revenue	25	1,790,913	1,768,565	1,574,014	1,554,372
Financial derivative liabilities	26,40	15,436	49,899	13,566	43,856
Deferred tax liabilities	36	35,913	35,257	31,564	30,987
Other non-current liabilities	27	89,408	90,309	78,580	79,372
		16,220,411	15,026,007	14,255,943	13,206,193
Total liabilities		24,202,360	22,547,870	21,271,191	19,817,075
Share capital	1,28	479,777	479,777	421,671	421,671
Other capital surplus	29	1,493,620	1,720,150	1,312,726	1,511,821
Other capital components	15,31	642,107	627,033	564,341	551,092
Retained earnings	30	216,471	81,761	190,254	71,859
Equity attributable to owners of the Parent Company		2,831,975	2,908,721	2,488,992	2,556,443
Non-controlling interest		122,891	123,062	108,008	108,158
Total equity		2,954,866	3,031,783	2,597,000	2,664,601
Total liabilities and equity		₩ 27,157,226	₩ 25,579,653	$ 23,868,191	$ 22,481,676

The U.S. dollars figures are provided for information purpose only and do not form part of the consolidated interim financial statements. Refer to Note 2.

The above consolidated interim statements of financial position should be read in conjunction with the accompanying notes.

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Comprehensive Income (Loss)
Three-month Periods Ended March 31, 2019 and 2018 (Unaudited)

(in millions of Korean won and thousands of US dollars, except per share amounts)		Korean won				Translation into US dollars(Note 2)			
	Notes		2019		2018		2019		2018
Sales	4,32,41	₩	3,138,922	₩	3,102,002	$	2,758,764	$	2,726,316
Cost of sales	37,41		2,645,151		2,595,331		2,324,794		2,281,008
Gross profit			493,771		506,671		433,970		445,308
Selling and administrative expenses	33,37,41		353,188		340,331		310,413		299,113
Operating income			140,583		166,340		123,557		146,195
Finance income	34		81,076		16,902		71,257		14,855
Finance costs	34		161,609		157,978		142,037		138,845
Share in profit of associates	13		250		343		220		301
Other non-operating income	35		114,853		162,030		100,943		142,406
Other non-operating expenses	35		242,414		188,722		213,055		165,866
Loss before income tax			(67,261)		(1,085)		(59,115)		(954)
Income tax expense (benefit)	36		(5,432)		8,951		(4,774)		7,867
Net loss for the period		₩	(61,829)	₩	(10,036)	$	(54,341)	$	(8,821)
Other comprehensive income (loss)									
Items that will not be reclassified to profit or loss									
Remeasurements of net defined benefit liabilities	23,30		(476)		(1,246)		(418)		(1,095)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	31		5,466		(13,164)		4,804		(11,570)
Revaluation surplus	15,31		-		(244)		-		(214)
Items that may be subsequently reclassified to profit or loss									
Shares of other comprehensive inome (loss) of associates, net of tax	13,31		104		(1,688)		91		(1,484)
Foreign currency translation adjustments, net of tax	31		9,953		(2,804)		8,748		(2,464)
Other comprehensive income (loss) for the period, net of tax			15,047		(19,146)		13,225		(16,827)
Total comprehensive loss for the period		₩	(46,782)	₩	(29,182)	$	(41,116)	$	(25,648)
Loss for the period attributable to:									
Owners of the Parent Company		₩	(62,515)	₩	(10,346)	$	(54,944)	$	(9,093)
Non-controlling interest			686		310		603		272
		₩	(61,829)	₩	(10,036)	$	(54,341)	$	(8,821)
Total comprehensive loss for the period attributable to:									
Owners of the Parent Company		₩	(47,817)	₩	(29,041)	$	(42,026)	$	(25,524)
Non-controlling interest			1,035		(141)		910		(124)
		₩	(46,782)	₩	(29,182)	$	(41,116)	$	(25,648)
Earnings (loss) per share	38								
Basic and diluted loss attributes to common shares		₩	(652)	₩	(108)	$	(0.6)	$	(0.1)
Basic and diluted loss attributes to preferred shares		₩	(602)	₩	(58)	$	(0.5)	$	(0.1)

The U.S. dollars figures are provided for information purpose only and do not form part of the consolidated interim financial statements. Refer to Note 2.

The above consolidated interim statements of comprehensive income should be read in conjunction with the accompanying notes.

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Changes in Equity
Three-month Periods Ended March 31, 2019 and 2018 (unaudited)

(in millions of Korean won)

		Attributable to owners of the Parent Company							
			Other capital surplus						
	Notes	Share capital	Additional paid-in capital	Others	Other capital components	Retained earnings	Total	Non-controlling interest	Total equity
Balance at January 1, 2018		₩ 479,777	₩ 946,195	₩ 956,019	₩ 670,772	₩ 576,675	₩ 3,629,438	₩ 121,665	₩ 3,751,103
Effects of changes in accounting policies		-	-	-	(5,726)	(44,728)	(50,454)	5	(50,449)
Balance after reflecting the effect of accounting policies		479,777	946,195	956,019	665,046	531,947	3,578,984	121,670	3,700,654
Dividends		-	-	-	-	(24,044)	(24,044)	(629)	(24,673)
Net loss for the period		-	-	-	-	(10,346)	(10,346)	310	(10,036)
Other comprehensive loss		-	-	-	(17,681)	(1,013)	(18,694)	(452)	(19,146)
Dividend for hybrid securities		-	-	-	-	(12,805)	(12,805)	-	(12,805)
Transfer of revaluation surplus		-	-	-	(29,247)	29,247	-	-	-
Others		-	-	-	-	(33)	(33)	(56)	(89)
Balance at March 31, 2018		₩ 479,777	₩ 946,195	₩ 956,019	₩ 618,118	₩ 512,953	₩ 3,513,062	₩ 120,843	₩ 3,633,905
Balance at January 1, 2019		₩ 479,777	₩ 946,195	₩ 773,955	₩ 627,033	₩ 81,761	₩ 2,908,721	₩ 123,062	₩ 3,031,783
Effects of changes in accounting policies		-	-	-	-	129	129	-	129
Balance after reflecting the effect of accounting policies		479,777	946,195	773,955	627,033	81,890	2,908,850	123,062	3,031,912
Dividends		-	-	-	-	(24,044)	(24,044)	(1,206)	(25,250)
Transfer of share premium		-	(226,530)	-	-	226,530	-	-	-
Net loss for the period		-	-	-	-	(62,515)	(62,515)	686	(61,829)
Other comprehensive income (loss)		-	-	-	15,074	(376)	14,698	349	15,047
Dividend for hybrid securities		-	-	-	-	(4,999)	(4,999)	-	(4,999)
Others		-	-	-	-	(15)	(15)	-	(15)
Balance at March 31, 2019		₩ 479,777	₩ 719,665	₩ 773,955	₩ 642,107	₩ 216,471	₩ 2,831,975	₩ 122,891	₩ 2,954,866

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Changes in Equity
Three-month Periods Ended March 31, 2019 and 2018 (unaudited)

(in thousands of US dollars)

		Attributable to owners of the Parent Company							
			Other capital surplus						
Translation into US dollars (Note 2)	Notes	Share capital	Additional paid-in capital	Others	Other capital components	Retained earnings	Total	Non-controlling interest	Total equity
Balance at January 1, 2018		$ 421,671	$ 831,600	$ 840,235	$ 589,534	$ 506,833	$ 3,189,873	$ 106,930	$ 3,296,803
Effects of changes in accounting policies		-	-	-	(5,033)	(39,311)	(44,344)	4	(44,340)
Balance after reflecting the effect of accounting policies		421,671	831,600	840,235	584,501	467,522	3,145,529	106,934	3,252,463
Dividends		-	-	-	-	(21,132)	(21,132)	(553)	(21,685)
Net loss for the period		-	-	-	-	(9,093)	(9,093)	272	(8,821)
Other comprehensive loss		-	-	-	(15,540)	(890)	(16,430)	(397)	(16,827)
Dividend for hybrid securities		-	-	-	-	(11,254)	(11,254)	-	(11,254)
Transfer of revaluation surplus		-	-	-	(25,705)	25,705	-	-	-
Others		-	-	-	-	(29)	(29)	(49)	(78)
Balance at March 31, 2018		$ 421,671	$ 831,600	$ 840,235	$ 543,256	$ 450,829	$ 3,087,591	$ 106,207	$ 3,193,798
Balance at January 1, 2019		$ 421,671	$ 831,600	$ 680,221	$ 551,092	$ 71,859	$ 2,556,443	$ 108,158	$ 2,664,601
Effects of changes in accounting policies		-	-	-	-	113	113	-	113
Balance after reflecting the effect of accounting policies		421,671	831,600	680,221	551,092	71,972	2,556,556	108,158	2,664,714
Dividends		-	-	-	-	(21,132)	(21,132)	(1,060)	(22,192)
Transfer of share premium		-	(199,095)	-	-	199,095	-	-	-
Net loss for the period		-	-	-	-	(54,944)	(54,944)	603	(54,341)
Other comprehensive income (loss)		-	-	-	13,249	(330)	12,919	307	13,226
Dividend for hybrid securities		-	-	-	-	(4,394)	(4,394)	-	(4,394)
Others		-	-	-	-	(13)	(13)	-	(13)
Balance at March 31, 2019		$ 421,671	$ 632,505	$ 680,221	$ 564,341	$ 190,254	$ 2,488,992	$ 108,008	$ 2,597,000

The U.S. dollars figures are provided for information purpose only and do not form part of the consolidated interim financial statements. Refer to Note 2.

The above consolidated interim statements of changes in equity should be read in conjunction with the accompanying notes.

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Cash Flows
Three-month Periods Ended March 31, 2019 and 2018 (unaudited)

(in millions of Korean won and thousands of US dollars)		Korean won		Translation into US dollars (Note 2)	
	Notes	2019	2018	2019	2018
Cash flows from operating activities					
Cash generated from operations					
Loss for the period		₩ (61,829)	₩ (10,036)	$ (54,341)	$ (8,821)
Adjustments to reconcile loss to net cash provided by operating activities:					
Loss on valuation of inventories		(2,258)	-	(1,985)	-
Provision for leased aircraft maintenance		2,488	12,763	2,187	11,217
Retirement benefit costs		48,802	40,562	42,892	35,649
Depreciation		511,677	419,874	449,707	369,023
Amortization		6,977	8,453	6,132	7,429
Bad debt expenses		224	51	197	45
Interest expense		160,974	121,574	141,478	106,850
Loss on valuation of derivatives		556	36,199	489	31,815
Loss on foreign currency translation		191,549	74,221	168,350	65,232
Loss on foreign currency transaction		4,431	14,515	3,894	12,757
Other bad debt expenses		-	149	-	131
Loss on disposal of property, aircraft and equipment		161	18,756	142	16,484
Impairment loss on property, aircraft and equipment		-	15,549	-	13,666
Income tax expense (benefit)		(5,432)	8,951	(4,774)	7,867
Other expenses		575	8,729	505	7,672
Interest income		(14,878)	(9,530)	(13,076)	(8,376)
Devidend income		(4,467)	(3,887)	(3,926)	(3,416)
Gain on valuation of equity method		(250)	(343)	(220)	(301)
Gain on valuation of derivatives		(46,816)	(52)	(41,146)	(46)
Gain on foreign currency translation		(44,359)	(74,924)	(38,987)	(65,850)
Gain on foreign currency transaction		-	(75)	-	(66)
Reversal of allowance for other doubtful accounts		(418)	(583)	(367)	(512)
Gain on disposal of property, aircraft and equipment		(943)	(7,592)	(829)	(6,673)
Gain on disposal of assets held for sale		-	(30,295)	-	(26,626)
Other income		(15)	-	(13)	-
		808,578	653,065	710,650	573,971
Changes in assets and liabilities resulting from operations:					
Decrease (increase) in trade receivables		2,824	(26,096)	2,482	(22,935)
Increase in other receivables		(7,123)	(25,986)	(6,260)	(22,839)
Decrease (increase) in amount due from customers for contract work		2,680	(16,857)	2,355	(14,815)
Decrease (increase) in inventories		62,685	(76,260)	55,093	(67,024)
Decrease in financial derivative assets		2,497	75	2,195	66
Decrease (increase) in advance payments		(7,465)	209,885	(6,561)	184,466
Increase in prepaid expenses		(11,107)	(10,851)	(9,762)	(9,537)
Decrease in trade payables		(5,667)	(7,741)	(4,981)	(6,803)
Increase in non-trade payables		12,015	13,770	10,560	12,102
Decrease in accrued expenses		(76,074)	(133,183)	(66,861)	(117,053)
Increase in advances		129,077	298,583	113,444	262,421
Decrease in unearned revenues		(956)	(3,699)	(840)	(3,251)
Decrease in amount due to customers for contract work		(6,811)	(102,912)	(5,986)	(90,448)
Decrease in financial derivative liabilities		(7,227)	(4,844)	(6,352)	(4,257)
Decrease in plan assets		9,222	8,272	8,105	7,270
Payment of severance benefit		(38,960)	(31,696)	(34,242)	(27,857)
Succession of defined benefit obligation		-	59	-	52
Decrease in provisions		(815)	(6,699)	(716)	(5,888)
Increase (decrease) in deferred revenue		(13,684)	253	(12,027)	222
Others		(18,399)	39,767	(16,170)	34,951
		26,712	123,840	23,476	108,843
Interest received		14,515	9,114	12,757	8,010
Dividends received		496	497	436	437
Income taxes paid		(2,000)	(1,967)	(1,758)	(1,729)
Net cash provided by operating activities		786,472	774,513	691,220	680,711

KOREAN AIR LINES CO., LTD. and Subsidiaries
Consolidated Interim Statements of Cash Flows
Three-month Periods Ended March 31, 2019 and 2018 (unaudited)

(in millions of Korean won and thousands of US dollars)		Korean Won		Translation into US dollars (Note 2)	
	Notes	2019	2018	2019	2018
Cash flows from investing activities					
Net increase in short-term financial instruments		43,576	33,604	38,298	29,534
Recovery of finance lease receivables		19,119	8,010	16,803	7,040
Purchase of finance lease receivables		(448)	-	(394)	-
Disposal of current portion of financial assets at amortized cost		1	7	1	6
Net increase in long-term financial instruments		81	47	71	41
Purchase of financial assets at fair value through profit or loss		(1,400)	-	(1,230)	-
Purchase of financial assets at fair value through other comprehensive income		-	(1,400)	-	(1,230)
Disposal of financial assets at fair value through other comprehensive income		-	2	-	2
Purchase of financial assets at amortized cost		(2)	-	(2)	-
Disposal of financial assets at amortized cost		-	7	-	6
Net increase in long-term loans		(2)	3	(2)	3
Disposal of property, aircraft, equipment and investment properties		3,102	15,481	2,726	13,606
Acquisition of property, aircraft, equipment and investment properties		(162,215)	(450,533)	(142,569)	(395,969)
Disposal of assets held for sale		-	151,809	-	133,423
Disposal of intangible assets		-	48	-	42
Acquisition of intangible assets		-	(220)	-	(193)
Decrease in guarantee deposits		34,614	100,551	30,422	88,373
Increase in guarantee deposits		(29,358)	(45,995)	(25,802)	(40,425)
Other cash flows from investing activities		-	(2)	-	(2)
Net cash used in investing activities		(92,932)	(188,581)	(81,678)	(165,743)
Cash flows from financing activities					
Net decrease in short-term borrowings		(56,250)	(100,115)	(49,438)	(87,990)
Repayment of short-term debentures		(70,000)	-	(61,522)	-
Repayment of current portion of long-term borrowings		(286,236)	(710,966)	(251,570)	(624,860)
Repayment of current portion of finance lease obligations		(381,491)	(311,946)	(335,288)	(274,166)
Proceeds from long-term borrowings		-	514,335	-	452,043
Proceeds from debentures		300,196	420,401	263,839	369,486
Proceeds from Asset backed securitization loans		-	350,000	-	307,611
Dividends for hybrid securities paid		(4,995)	(3,360)	(4,390)	(2,953)
Interest paid		(166,564)	(122,682)	(146,391)	(107,824)
Other cash flows from financing activities		(3,154)	-	(2,771)	-
Net cash provided by (used in) financing activities		(668,494)	35,667	(587,531)	31,347
Net increase in cash and cash equivalents		25,046	621,599	22,011	546,315
Cash and cash equivalents at the beginning of the period		1,503,951	761,235	1,321,806	669,041
Effects of exchange rate changes on cash and cash equivalents		14,767	10,727	12,980	9,428
Cash and cash equivalents at the end of the period		₩ 1,543,764	₩ 1,393,561	$ 1,356,797	$ 1,224,784

The U.S. dollars figures are provided for information purpose only and do not form part of the consolidated interim financial statements. Refer to Note 2.

The above consolidated interim statements of cash flows should be read in conjunction with the accompanying notes.

1. General

Korean Air Lines Co., Ltd. (the "Company" or "Parent Company") and subsidiaries (collectively referred to as the "Group") has prepared the consolidated interim financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS") 1110 *Consolidated Financial Statements.* The Company was established on June 19, 1962, and is engaged in the business of domestic and international airline services, manufacture of aircraft parts, maintenance of aircraft and catering of in-flight meals. The Company has been a publicly traded company upon listing its common shares on the Korea Exchange since 1966 and its headquarters is located in Seoul, Korea.

Total share capital of the Company as of March 31, 2019, is ₩479,777 million (including ₩5,554 million of preferred shares), and major shareholders of the Company are Hanjin KAL Co., Ltd. (29.96%) and its related parties (3.39%).

2. Summary of Significant Accounting Policies

Basis of Financial Statement Presentation

The Group prepares statutory financial statements in the Korean language (Hangul) in accordance with Korean IFRS. Certain accounting principles applied by the Company that conform with financial accounting standards and accounting principles in the Republic of Korea may not conform with generally accepted accounting principles in other countries. Accordingly, these financial statements are intended for use by those who are informed about Korean accounting principles and practices. The accompanying consolidated interim financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Group's financial position, financial performance or cash flows, is not presented in the accompanying consolidated interim financial statements.

The Group maintains its accounting records and prepares its financial statements in Korean won. The United States dollar ("US dollar") amounts disclosed in the accompanying financial statements are presented solely for the convenience of the reader at the Korean won rate of 1,137.8 to the US dollar. Such translations should not be construed as representation that the Korean Won amounts represent, or have been or could be converted into, Unites States dollars at that or any other rate.

2.1 Basis of Preparation

The Group's consolidated interim financial statements as of and for the three months ended March 31, 2019, are prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting.* In order to understand these consolidated interim financial statements, users should use annual consolidated financial statements that are prepared in accordance with Korean IFRS as of December 31, 2018.

The Group's accounting policies applied for the accompanying consolidated interim financial statements are the same as the policies applied for the preparation of consolidated financial statements as of and for the year ended December 31, 2018, except for applying new standards and amendments.

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2019.

- Amendments to Korean IFRS 1116 *Leases* ("Korean IFRS 1116")

Korean IFRS 1116 replaces Korean IFRS 1017 *Leases*. Korean IFRS 1116 adopts single lessees model and requires lessees to recognize assets and liabilities for all leases for which the lease term is greater than 12 months and the underlying asset is not minor. Lessees will be required to recognize the right-of-use asset and lease liability that represents the obligation to pay the lease payments.

The Group changed its accounting policies as a result of adopting Korean IFRS 1116. The Group applied the accounting policies which was changed by Korean IFRS 1116 transitional provisions retrospectively. The cumulative effect of initial applying KFIRS 1116 was adopted on the date of initial application (January 1, 2019). The Group does not elect to restate its previous financial statements, which is the comparative information.

The impacts of adopting Korean IFRS 1116 on the Group's consolidated statements of financial position as of March 31, 2019 and January 1, 2019 are follows:

(in millions of Korean won)		**March 31, 2019**		**January 1, 2019**
Right-of-use assets[1]	₩	1,347,081	₩	1,391,431
Finance lease receivables[2]				
Current		56,567		55,587
Non-current		200,544		207,725
Finance lease obligations[3]				
Current		304,265		311,477
Non-current		1,288,242		1,318,780
Equity		129		129

[1] Included in the line item 'property, aircraft and equipment' in the consolidated statements of financial position.
[2] Included in the line item 'finance lease receivables' in the consolidated statements of financial position.
[3] Included in the line item 'finance lease obligations' in the consolidated statements of financial position.

The amount related to lease recognized in consolidated statement of comprehensive income (loss) for the three-month ended March 31, is as follows:

(in millions of Korean won)		**2019**
Depreciation of right-of-use assets	₩	60,481
Interest expense relating to finance lease obligations		15,549
Interest income relating to finance lease receivables		3,600

Total cash outflow for leases in 2019 due to amendments of the standards was ₩96,087 million.

• Enactment of Korean IFRS 1109 *Financial Instruments* ("Korean IFRS 1109")

The narrow-scope amendments made to Korean IFRS 1109 enable entities to measure certain pre-payable financial assets with negative compensation at amortized cost. When a modification of a financial liability measured at amortized cost that does not result in the derecognition, a modification gain or loss shall be recognized in profit or loss. The amendments has no material effect on the Group's consolidated financial statements.

• Enactment of Korean IFRS 1019 *Employee Benefits*

The amendments require that an entity shall calculate current service cost and net interest for the remainder of the reporting period after a plan amendment, curtailment or settlement based on updated actuarial assumptions from the date of the change. The amendments also require that a reduction in a surplus must be recognized in profit or loss even if that surplus was not previously recognized because of the impact of the asset ceiling. The amendments has no material effect on the Group's consolidated financial statements.

• Enactment of Korean IFRS 1028 *Investments in Associates and Joint Ventures*

The amendments clarify that an entity shall apply Korean IFRS 1109 to financial instruments in an associate or joint venture to which the equity method is not applied. These include long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture. The amendments has no material effect on the Group's consolidated financial statements.

• Amendments to Korean IFRS 2123 *Uncertainty over Income Tax Treatments*

The enactment clarifies the accounting for uncertainties in income taxes in the event that the decision of taxation authorities or courts can change tax treatment. The enactment presents calculating methods of disclosure amount based on the possibility of future recognition of the income tax treatment, and requires disclosure of the uncertainty of the amount.

• Annual Improvements to Korean IFRS 1103 *Business Combination*

The amendments clarify that when a party to a joint arrangement obtains control of a business that is a joint operation, and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the transaction is a business combination achieved in stages. In such cases, the acquirer shall re-measure its entire previously held interest in the joint operation.

• Annual Improvements to Korean IFRS 1111 *Joint Agreements*

The amendments clarify that when a party that participates in, but does not have joint control of, a joint operation might obtain joint control of the joint operation in which the activity of the joint operation constitutes a business. In such cases, previously held interests in the joint operation are not re-measured.

• Annual Improvements to Paragraph 57A of Korean IFRS 1012 *Income Tax*

The amendment is applied to all the income tax consequences of dividends and requires an entity to recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized those past transactions or events.

• Annual Improvements to Korean IFRS 1023 *Borrowing Cost*

The amendments clarify that if a specific borrowing remains outstanding after the related qualifying asset is ready for its intended use (or sale), it becomes part of general borrowings.

3. Critical Accounting Estimates

The preparation of consolidated financial statements requires the application of accounting policies, certain critical accounting estimates and assumptions that may have a significant impact on the assets (liabilities) and incomes (expenses). Management’s estimates of outcomes may differ from actual outcomes if management’s estimates and assumptions based on management’s best judgement at the reporting date are different from the accrual 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 change, if the change affects that period only. Alternatively if the change in accounting estimate affects both the period of change and future periods, that change is recognized in the profit or loss of all those periods.

The significant accounting estimates and assumptions are consistently applied to all periods presented, except for the assumptions for income tax expense.

4. Segment Information

(1) The Group's segment information is prepared for the purpose of resource allocation and assessment of segment performance. The Group's reportable segments are as follows:

Segment	Type of service	Customers' information
Air transport	Passenger and cargo transportation	Individual, enterprises, government, etc.
Aerospace	Maintenance of aircraft and manufacture of aircraft parts	Ministry of National Defense, etc.
Hotel, etc.	Accommodation service, Limousine bus transportation, etc.	Individual, etc.

(2) Operating results by reportable segments for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)

	2019					
	Air transport	**Aerospace**	**Hotel**	**Others**	**Consolidation adjustments**	**Total**
Total sales	₩ 2,973,977	₩ 178,925	₩ 41,355	₩ 67,553	₩ (122,888)	₩ 3,138,922
Intersegment sales	(91,471)	-	(3,115)	(28,302)	122,888	-
Net sales	2,882,506	178,925	38,240	39,251	-	3,138,922
Operating income (loss)	140,539	4,544	(14,360)	7,811	2,049	140,583
Depreciation and amortization	(497,020)	(3,555)	(15,328)	(3,141)	390	(518,654)
Total assets	25,127,333	1,189,458	1,602,420	431,047	(1,193,032)	27,157,226

(in millions of Korean won)

	2018					
	Air transport	**Aerospace**	**Hotel**	**Others**	**Consolidation adjustments**	**Total**
Total sales	₩ 2,956,413	₩ 158,785	₩ 37,854	₩ 68,789	₩ (119,839)	₩ 3,102,002
Intersegment sales	(87,885)	-	(2,938)	(29,016)	119,839	-
Net sales	2,868,528	158,785	34,916	39,773	-	3,102,002
Operating income (loss)	166,483	5,735	(12,949)	7,834	(763)	166,340
Depreciation and amortization	(406,906)	(5,260)	(13,399)	(2,705)	(57)	(428,327)
Total assets	23,250,773	1,195,277	1,595,394	429,562	(1,204,022)	25,266,984

(3) Operating results by geographical area for the three-month periods ended March 31 2019 and 2018, are as follows:

(in millions of Korean won)

	2019						
	Local companies			Overseas companies		Consolidation adjustments	Total
	Domestic lines and sale	International lines and export	Total	Americas	Asia and others		
Total sales	₩ 507,665	₩ 2,719,638	₩ 3,227,303	₩ 34,455	₩ 52	₩ (122,888)	₩ 3,138,922
Internal sales			(117,060)	(5,785)	(43)	122,888	-
Net sales			3,110,243	28,670	9	-	3,138,922
Operating income			151,530	(12,980)	(16)	2,049	140,583
Total assets			26,764,959	1,581,629	3,670	(1,193,032)	27,157,226

(in millions of Korean won)

	2018						
	Local companies			Overseas companies		Consolidation adjustments	Total
	Domestic lines and sale	International lines and export	Total	Americas	Asia and others		
Total sales	₩ 467,727	₩ 2,722,424	₩ 3,190,151	₩ 31,502	₩ 188	₩ (119,839)	₩ 3,102,002
Internal sales			(113,800)	(5,926)	(113)	119,839	-
Net sales			3,076,351	25,576	75	-	3,102,002
Operating income			179,285	(12,289)	108	(764)	166,341
Total assets			24,877,172	1,574,953	18,880	(1,204,021)	25,266,984

(4) There is no single customer who accounted for more than 10% of the Group's revenue for the three-month periods ended March 31, 2019 and 2018.

5. Cash and Cash Equivalents

Cash and cash equivalents as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)		March 31, 2019		December 31, 2018
Cash on hand	₩	146	₩	137
Bank deposits		1,543,619		1,503,814
	₩	1,543,765	₩	1,503,951

6. Restricted Deposits

Restricted deposits as of March 31, 2019, consist of the following:

(in millions of Korean won and thousands of US dollars)		March 31, 2019	
Cash and cash equivalents	₩	224,266	Deposit of trust account for payment purposes related to asset backed security loans
Short-term financial instruments	₩	14,139	Performance guarantee deposit on the freight, pledged for the floating rate note, guarantee for Incheon International Airport terminal and others
	$	41,159	Pledged for issuance of foreign currency bonds, guarantee deposit on North America L/C and others
Financial assets at fair vale	₩	97,971	Pledged for issuance of foreign currency denominated bonds, pledged for equity contributed to Korea Defense Industry Association and others
Long-term financial instruments	₩	1,573	Checking accounts deposit
	₩	337,949	
	$	41,159	

7. Trade and Other Receivables

(1) Trade and other receivables as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)	March 31, 2019		December 31, 2018	
	Current	**Non-current**	**Current**	**Non-current**
Trade receivables	₩ 742,629	₩ -	₩ 706,009	₩ -
Less: loss allowance	(372)	-	(255)	-
	742,257	-	705,754	-
Loans	-	43	-	40
Non-trade receivables	103,730	-	117,574	-
Less: loss allowance	(46,526)	-	(46,838)	-
	57,204	-	70,736	-
Accrued revenues	93,584	-	67,665	-
Less: loss allowance	-	-	-	-
	93,584	-	67,665	-
	₩ 893,045	₩ 43	₩ 844,155	₩ 40

(2) Changes in allowance for trade and other receivables for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	**2019**	**2018**
Beginning balance	₩ 255	₩ 6,786
Bad debt expenses	117	38
Ending balance	₩ 372	₩ 6,824

8. Financial Assets at Fair Value

Financial assets at fair value as of March 31, 2019 and December 31, 2018, consists of:

(in millions of Korean won)	**March 31,2019**	**December 31, 2018**
Financial assets at fair value through other comprehensive income		
Listed equity securities[1]	₩ 107,242	₩ 99,875
Unlisted equity securities	48,338	48,338
	155,580	148,213
Financial assets at fair value through profit or loss		
Beneficiary certificates	7,000	5,600
Unlisted equity securities[2]	16,120	16,120
	23,120	21,720
	₩ 178,701	₩ 169,933

[1]As of March 31, 2019, listed securities amounting to ₩81,877 million are pledged as collateral for foreign currency bonds (Note 6).
[2] The above investments in other equity securities amounting to ₩16,093 million are pledged to the Korea Defense Industry Association as collateral for performance guarantee (Note 6).

9. Other Financial Assets

(1) Other financial assets as of March 31, 2019 and December 31, 2018, consist of the followings:

(in millions of Korean won)	March 31, 2019		December 31, 2018	
	Current	Non-current	Current	Non-current
Guarantee deposits	₩ -	₩ 208,937	₩ -	₩ 210,852
Others	10	-	10	-
	₩ 10	₩ 208,937	₩ 10	₩ 210,852

(2) There are no other financial assets overdue or impaired for as of March 31, 2019 and December 31, 2018.

10. Inventories

Inventories as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)

	March 31, 2019			December 31, 2018		
	Acquisition cost	Valuation allowance	Book value	Acquisition cost	Valuation allowance	Book value
Merchandise	₩ 18,974	₩ -	₩ 18,974	₩ 19,884	₩ -	₩ 19,884
Work in progress	244,418	(3,648)	240,770	262,299	(4,709)	257,590
Finished goods	7,171	(218)	6,953	26,444	(984)	25,460
Raw materials	122,256	-	122,256	121,278	-	121,278
Supplies	590,096	(65,599)	524,497	629,448	(67,015)	562,433
Materials in transit	56,218	-	56,218	43,471	-	43,471
	₩ 1,039,133	₩ (69,465)	₩ 969,668	₩ 1,102,824	₩ (72,708)	₩ 1,030,116

The Group recognized reversal of loss on valuation of inventories amounting to ₩3,243 million for the three-month period ended March 31, 2019.

11. Finance Lease Receivables

(1) The Group has offered the finance leases of the aircraft, and the minimum lease payments and present value of the finance leases as of March 31, 2019 and December 31, 2018, are as follows:

(in millions of Korean won)		**March 31, 2019**		**December 31, 2018**
Less than one year	₩	100,043	₩	44,230
Within one year to five years		310,596		106,689
Over five years		29,209		-
		439,848		150,919
Present value of discounts		(59,610)		(21,956)
		380,238		128,963
Less: current portion of finance lease receivables		(84,416)		(29,634)
	₩	295,822	₩	99,329

(2) Finance lease receivables were not impaired as of March 31, 2019 and December 31, 2018.

12. Investments in Subsidiaries

(1) Investments in subsidiaries as of March 31, 2019 and December 31, 2018, consist of the following:

(in percentage, %)

			Ownership of the Group	
	Principal business	**Location**	**March 31, 2019**	**December 31, 2018**
Korea Airport Service Co., Ltd.	Airport support service	Korea	59.54%	59.54%
Hanjin Information Systems & Telecommunication Co., Ltd.	Software development and supply	Korea	99.35%	99.35%
Air Total Service Co., Ltd.	Transportation and hotel management service	Korea	100.00%	100.00%
Hanjin International Corp.	Hotel and rental service	USA	100.00%	100.00%
Hanjin Central Asia LLC.	Hotel business	Uzbekistan	100.00%	100.00%
Incheon Aviation Tech Co., Ltd. (“IAT”)	Aircraft engine repair service	Korea	86.13%	86.13%
Wangsan Leisure Development Co., Ltd. (“WLD”)	Sports and leisure service	Korea	100.00%	100.00%
Korea Global Logistics System Co., Ltd.	Telecommunication service	Korea	95.00%	95.00%
Air Korea Co., Ltd.	Airport support service	Korea	100.00%	100.00%

TAS	Seconding personnel service	Korea	100.00%	100.00%
Cyber Sky Co., Ltd.	Online sales	Korea	100.00%	100.00%
KAL 11 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 11B Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 11C Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 12 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 16 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 17 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 18 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 19 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 20 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 20A Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 21 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 22 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%
KAL 23 Asset Securitization Specialty Company[1]	Issuance and repayment of ABS loans	Korea	0.50%	0.50%

[1] The Group classified KAL Asset Securitization Specialty Companies as investments in subsidiaries because the Group controls an investee when it is exposed or has the rights to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

(2) Financial information of the Group's major subsidiaries as of March 31, 2019, is as follows:

(in millions of Korean won)		**Korea Airport Service Co., Ltd.**		**Hanjin Information Systems & Telecommunication Co., Ltd.**
Current assets	₩	185,603	₩	60,599
Non-current assets		251,990		35,523
Total assets		437,593		96,122
Current liabilities		47,047		21,226
Non-current liabilities		74,324		7,998
Total liabilities		121,371		29,224
Total shareholders' equity	₩	316,222	₩	66,898

The above financial information is based on the separate financial statements of each subsidiaries.

(3) Financial performance information of the Group's major subsidiaries for the three-month period ended March 31, 2019, is as follows:

(in millions of Korean won)		**Korea Airport Service Co., Ltd.**		**Hanjin Information Systems & Telecommunication Co., Ltd.**
Sales	₩	116,069	₩	36,817
Operating income		3,484		1,879
Net income for the period		2,304		1,176

The above financial information is based on the separate financial statements of each subsidiaries.

(4) Cash flow information of the Group's major subsidiaries for the three-month periods ended March 31, 2019, is as follows:

(in millions of Korean won)	**Korea Airport Service Co., Ltd.**		**Hanjin Information Systems & Telecommunication Co., Ltd.**	
Cash flows from operating activities	₩	23,973	₩	3,658
Cash flows from investing activities		(6,484)		2,630
Cash flows from financing activities		(7,277)		(317)
Net changes in cash and cash equivalents		10,212		5,971
Effects of exchange rate changes		57		-
Beginning balance		11,142		4,003
Ending balance	₩	21,411	₩	9,974

The above cash flow information is based on the separate financial statements of each subsidiaries.

(5) Non-controlling interests' financial position as of March 31 and 2019, attributable financial performance for the three-month period ended March 31, 2019 and dividend paid to non-controlling interests of major subsidiaries are as follows:

(in millions of Korean won)	**Korea Airport Service Co., Ltd.**		**Hanjin Information Systems & Telecommunication Co., Ltd.**	
Percentage of ownership[1]		38.36%		0.65%
Non-controlling interests	₩	121,722	₩	450
Net income attributable to non-controlling interests		839		8
Dividend paid to non-controlling interests		(1,173)		(2)

[1] Percentage of ownership is reflected subsidiaries own treasury stock.

13. Investments in Associates

(1) Investments in associates as of March 31, 2019 and December 31, 2018, consist of the followings:

(in millions of Korean won)

March 31, 2019						
Description	Principal business	Location	Ownership (%)	Acquisition cost	Book value	Closing month
Hanjin Int'l Japan Co., Ltd.	Airport support service	Japan	50.00	₩ 4,266	₩ 7,119	December
				₩ 4,266	₩ 7,119	

(in millions of Korean won)

December 31, 2018						
Description	Principal business	Location	Ownership (%)	Acquisition cost	Book value	Closing month
Hanjin Int'l Japan Co., Ltd.	Airport support service	Japan	50.00	₩ 4,266	₩ 6,759	December
				₩ 4,266	₩ 6,759	

(2) Changes in investments in associates for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	2019			
	Beginning balance	Gain on valuation of equity method	Net changes in interests of equity method	Ending balance
Hanjin Int'l Japan Co., Ltd.	₩ 6,759	₩ 250	₩ 110	₩ 7,119
	₩ 6,759	₩ 250	₩ 110	₩ 7,119

(in millions of Korean won)	2018			
	Beginning balance	Gain on valuation of equity method	Net changes in interests of equity method	Ending balance
Hanjin Int'l Japan Co., Ltd.	₩ 5,835	₩ 343	₩ 346	₩ 6,524
	₩ 5,835	₩ 343	₩ 346	₩ 6,524

(3) Financial information of the Group's investments in associates as of March 31, 2019, is as follows:

(in millions of Korean won)		**Hanjin Int'l Japan Co., Ltd.**
Current assets	₩	15,778
Non-current assets		253
Total assets	₩	16,031
Current liabilities	₩	1,716
Non-current liabilities		77
Total liabilities	₩	1,793
Total shareholders' equity	₩	14,238
Sales	₩	6,750
Operating income	₩	1,062

14. Interests in Joint Operations

The Group owns a joint investment building, which has the joint arrangement. Under the joint arrangement, the Group has 70% ownership of the Inha International Medical Center building located in Incheon, Korea, and recognized income and expenses in relation to its share.

The Parent Company has agreed to cooperate with Delta Airlines on joint business for the Pacific route since May 1, 2018. The two companies have joint marketing and sales activities on the Pacific route and share their financial results.

15. Property, Aircraft and Equipment

(1) Changes in property, aircraft and equipment for the three-month periods ended March 31, 2018 and 2019, are as follows:

(in millions of Korean won)	**2019**					
	Beginning balance	**Acquisition**	**Disposal**	**Depreciation**	**Others**[1]	**Ending balance**
Land	₩ 2,478,366	₩ -	₩ (1,290)	₩ -	₩ 1,518	₩ 2,478,594
Leased land	25,668	-	-	-	-	25,668
Buildings	1,576,376	4,817	(852)	(11,905)	17,408	1,585,844
Structures	97,505	405	-	(2,204)	308	96,014
Machinery	98,117	290	(128)	(3,006)	-	95,273
Aircraft	2,492,362	-	-	(57,542)	11,047	2,445,867
Engines	1,515,260	-	-	(108,299)	111,253	1,518,214
Leased aircraft	8,154,395	1,755	-	(167,480)	174,721	8,163,391

Leased engines	1,845,136	-	-	(78,813)	65,074	1,831,397
Aircraft parts	186,473	14,107	(2,354)	(4,686)	-	193,540
Others	238,812	12,298	(1,966)	(14,373)	5,409	240,180
Construction in progress	939,532	320,170	-	-	(347,819)	911,883
Right-of-use asset[2]	-	16,131	-	(60,481)	1,391,431	1,347,081
	₩ 19,648,002	₩ 369,973	₩ (6,590)	₩ (508,789)	₩ 1,430,350	₩ 20,932,946

(in millions of Korean won)	2018					
	Beginning balance	**Acquisition**	**Disposal**	**Depreciation**	**Others[1]**	**Ending balance**
Land	₩ 2,487,668	₩ -	₩ -	₩ -	₩ (1,444)	₩ 2,486,223
Leased land	25,668	-	-	-	-	25,668
Buildings	1,570,917	-	-	(14,764)	(4,089)	1,552,064
Structures	101,601	1,199	-	(1,316)	(917)	100,568
Machinery	76,273	636	(3)	(2,914)	13	74,005
Aircraft	2,029,400	2,323	(11,387)	(53,858)	308,419	2,274,898
Engines	838,558	7,578	(3,105)	(60,423)	127,042	909,649
Leased aircraft	7,989,770	2,558	-	(166,304)	156,850	7,982,875
Leased engines	2,190,331	840	-	(102,978)	142,488	2,230,680
Aircraft parts	164,584	9,059	(2,033)	(4,136)	-	167,473
Others	241,350	9,073	(726)	(12,944)	10,487	247,240
Construction in progress	1,191,175	678,532	-	-	(782,493)	1,087,214
	₩ 18,907,294	₩ 711,798	₩ (17,254)	₩ (419,637)	₩ (43,645)	₩ 19,138,557

[1]Other increase or decrease was mainly due to the transfer of construction in progress, the effects of Korean IFRS 1116 adoption and capitalized borrowing costs.

[2]As of March 31, 2019, right-of-use assets amounting to ₩1,347,081 million are recognized in relation to the adoption of Korean IFRS 1116.

(2) The Group capitalized borrowing costs of ₩4,001 million for the three-month period ended March 31, 2019. The specific borrowing interest rate and general borrowing interest rate used to calculate borrowing costs are 4.03% and 3.93%, respectively.

(3) The Group has been applying revaluation model to land. Land was revalued on December 31, 2017, by an external independent valuation specialist. The revaluation was conducted based on 'Standard Public Land Price Evaluation Method' and 'transaction comparison approach' according to the conditions of transactions with an independent third parties. The book value of land using revaluation model and historical cost model as of March 31, 2019, is as follows:

(in millions of Korean won)	March 31, 2019			
	Revaluation model		Historical cost model	
Land	₩	2,478,594	₩	1,719,072
Leased land		25,668		13,385
	₩	2,504,262	₩	1,732,457

The Group recognized revaluation surplus of ₩849,679 million, before income tax, and recognized accumulated revaluation loss of ₩80,051 million for the three-month period ended March 31, 2019.

(4) Fair value measurements of land and leased land by fair value hierarchy levels as of March 31, 2019, are as follows:

(in millions of Korean won)	March 31, 2019							
	Level 1		Level 2		Level 3		Total	
Land	₩	-	₩	-	₩	2,478,594	₩	2,478,594
Leased land		-		-		25,668		25,668
	₩	-	₩	-	₩	2,504,262	₩	2,504,262

(5) There was no changes between Level 1 and Level 2 for the three-month period ended March 31, 2019.

16. Pledged Assets and Guarantees (Non-Financial Assets)

(1) As of March 31, 2019, assets provided as collateral or pledges to financial institutions by the Group are as follows :

(in millions of Korean won, except share data)	March 31, 2019				
	Book value		Collateralized amount or shares	Gurantee	Description
Land and buildings	₩	3,849,090	2,825,202	Korea Development Bank and others	Collateral for short-term and long-term borrowings
Aircraft and engines		3,036,257	3,448,199		
Facility usage right, etc.		55,817	157,569		
Investments in subsidiaries- Hanjin International Corp		-	91,440,000 shares	Morgan Stanley Senior Funding, INC and others	
	₩	6,941,164			

(2) The Group has provided leased aircraft, leased engines and leased land as collateral to the lessors for the obligations under finance leases.

17. Investments in Properties

(1) Changes in the carrying amount of investments in properties for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	2019				
	Beginning balance	**Acquisition**	**Depreciation**	**Others[1]**	**Ending balance**
Land	₩ 57,018	₩ -	₩ -	₩ 107	₩ 57,125
Buildings	273,042	-	(2,888)	7,240	277,394
	₩ 330,060	₩ -	₩ (2,888)	₩ 7,347	₩ 334,519

(in millions of Korean won)	2018				
	Beginning balance	**Acquisition**	**Depreciation**	**Others[1]**	**Ending balance**
Land	₩ 54,452	₩ -	₩ -	₩ 11,632	₩ 66,084
Buildings	267,893	-	(238)	(11,371)	256,284
	₩ 322,345	₩ -	₩ (238)	₩ 261	₩ 322,368

[1]Other increase or decrease was due to the transfer of property, aircraft and equipment to investment properties and foreign currency translation adjustments.

(2) Revenue related to investments in properties was ₩2,920 million and ₩1,126 million for the three-month periods ended March 31, 2019 and 2018, respectively.

18. Intangible Assets

Changes in the carrying amount of intangible assets for the three-month periods ended March 31, 2019 and 2018, is as follows:

(in millions of Korean won)	2019					
	Beginning balance	**Acquisition**	**Disposal**	**Amortization**	**Others**	**Ending balance**
Goodwill	₩ 17,515	₩ -	₩ -	₩ -	₩ -	₩ 17,515
Facility usage rights	64,333	-	-	(2,510)	-	61,822
Other intangibles	218,914	-	-	(4,466)	-	214,448
	₩ 300,762	₩ -	₩ -	₩ (6,977)	₩ -	₩ 293,786

(in millions of Korean won)	2018					
	Beginning balance	**Acquisition**	**Disposal**	**Amortization**	**Others[1]**	**Ending balance**
Goodwill	₩ 17,515	₩ -	₩ -	₩ -	₩ -	₩ 17,515
Facility usage rights	74,375	-	-	(2,510)	-	71,864
Development costs	34,681	-	-	(1,476)	(33,205)	-
Other intangibles	236,925	550	(47)	(4,467)	-	232,961
	₩ 363,496	₩ 550	₩ (47)	₩ (8,453)	₩ (33,205)	₩ 322,341

[1]Other increase or decrease was mainly due to the transfer of research and development costs to long-term prepaid expenses and ordinary development expenses.

19. Other Assets

Other assets as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)	**March 31, 2019**		**December 31, 2018**	
	Current	**Non-current**	**Current**	**Non-current**
Advance payments	₩ 98,932	₩ 58	₩ 90,067	₩ 58
Prepaid expenses	53,488	103,627	65,234	99,532
Others	56,541	3,376	19,943	3,377
	₩ 208,961	₩ 107,061	₩ 175,244	₩ 102,967

20. Trade and Other Payables

Trade and other payables as of March 31, 2019 and December 31, 2018, are as follows:

(in millions of Korean won)	**March 31, 2019**		**December 31, 2018**	
	Current	**Non-current**	**Current**	**Non-current**
Trade payables	₩ 155,954	₩ -	₩ 153,624	₩ -
Non-trade payables	145,860	3,616	135,221	3,906
Accrued expenses	619,169	15,899	657,906	17,417
Dividends payables	25,957	-	1,055	-
	₩ 946,940	₩ 19,515	₩ 947,806	₩ 21,323

21. Borrowings and Debentures

(1) Short-term borrowings as of March 31, 2019 and December 31, 2018, consist of the followings:

(in millions of Korean won)

	Lender	Annual interest rate		March 31, 2019		December 31, 2018
Short-term borrowings in Korean won	NongHyup Bank	3M MOR + 1.67%	₩	90,000	₩	90,000
	KDB	-		-		70,000
		3.35%		70,000		-
	IVY 1st Co., Ltd and others	3.38%		60,000		60,000
				220,000		220,000
Short-term borrowings in foreign currencies	KDB	3M LIBOR + 1.93% ~2.20%		175,221		172,187
	Hana Bank	3M LIBOR + 2.10% ~2.80%		124,963		122,799
	BANK OF CHINA and others	3M JPY LIBOR + 2.19% ~2.38%		61,694		60,791
		3M LIBOR + 2.15% ~ 2.70%		102,402		156,534
				464,280		512,311
			₩	684,280	₩	732,311

(2) Long-term borrowings as of March 31, 2019 and December 31, 2018, consist of the followings:

(in millions of Korean won)

	Lender	Annual interest rate	Maturity		March 31, 2019		December 31, 2018
Long-term borrowings in Korean won	KDB	3.35% ~ 4.43%	2026-03-28	₩	526,039	₩	536,180
	Korea Resource Corporation	2.60%	2020-12-15		95		127
	Kookmin Bank and others	2.50% ~ 5.45%	2028-07-25		516,399		527,440
		3M CD + 2.04%	2023-07-25		40,000		40,000
		3M MOR + 1.96%	2020-03-28		120,000		120,000
					1,202,533		1,223,747
Long-term borrowings in foreign currencies	KDB	3M LIBOR + 1.92% ~ 2.31%	2025-09-30		385,572		378,896
		3M EURIBOR +1.90%	2020-02-27		114,971		115,124
		1.79%	2019-09-26		114,971		115,124
	KDB (Singapore branch)	3M LIBOR + 2.50%	2021-02-23		18,205		20,126
	The Export-Import Bank of Korea	3M LIBOR + 2.51%	2024-06-27		99,375		102,305

Bank of Communications	3M LIBOR + 2.70%	2023-08-28	138,390	143,549
Morgan Stanley Senior Funding, Inc. and others	3M LIBOR + 2.5%	2020-10-18	682,680	670,860
	3M LIBOR + 1.70% ~ 3.5%	2022-02-26	334,335	357,534
Hana Bank and others	3M JPY LIBOR + 1.30%	2020-12-22	39,425	44,397
	2.32%	2022-04-27	44,077	47,531
			1,972,002	1,995,447
			3,174,535	3,219,194
Less: current portion of long-term borrowings			(1,010,104)	(845,561)
			₩ 2,164,431	₩ 2,373,633

(3) Debentures as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)

Series	Issue date	Maturity	Annual interest rate	March 31, 2019	December 31, 2018
47-2nd	2012-10-08	2019-10-08	4.16%	₩ 250,000	₩ 250,000
49-3rd	2012-12-13	2019-12-13	4.36%	170,000	170,000
63-3rd	2016-03-21	2019-03-21	3M LIBOR + 1.20%	-	44,724
69th[2]	2017-02-27	2020-02-27	3M JPY LIBOR + 4.10%	26,220	32,295
71st	2017-10-18	2019-04-18	4.19%	160,000	160,000
72nd[1]	2017-10-26	2020-10-26	3M LIBOR + 0.95%	34,134	33,543
73rd	2017-10-30	2019-04-30	4.19%	40,000	40,000
74th	2017-11-27	2019-05-27	4.19%	40,000	40,000
75th	2017-12-11	2019-06-11	4.19%	30,000	30,000
76-1st[2]	2018-02-27	2021-02-27	3M JPY LIBOR + 3.30%	41,130	40,527
76-2nd[2]	2018-02-27	2021-02-27	3M JPY LIBOR + 2.80%	61,694	60,791
77th	2018-03-06	2021-03-06	5.88%	341,340	335,430
78th	2018-04-11	2020-04-11	4.05%	240,000	240,000
80th[1]	2018-06-28	2021-06-28	3M LIBOR + 0.95%	34,134	33,543
81-1st	2018-08-06	2020-08-06	3.79%	185,000	185,000
81-2nd	2018-08-06	2021-08-06	4.57%	115,000	115,000
82-1st	2018-11-23	2020-11-23	3.74%	70,000	70,000
82-2nd	2018-11-23	2021-11-23	4.22%	100,000	100,000
84th[3]	2019-02-21	2022-02-21	0.32%	308,472	-
Kexim[4]	2017-09-28	2020-09-28	3M LIBOR + 0.95%	341,340	335,430
				2,588,464	2,316,283
		Discount on debentures		(16,509)	(14,574)
				2,571,955	2,301,709
		Less: current portion of debentures		(747,067)	(783,357)
		Present value of discounts, less current portion		293	607
				₩ 1,825,181	₩ 1,518,959

[1] Shinhan Bank has provided guarantees up to maximum $60,000 thousand for the 72nd, and the 80th guaranteed debentures.
[2] Kookmin Bank has provided guarantees up to maximum JPY 5,546,142 thousand for the 69th, JPY 4,140,000 thousand for the 76-1st and JPY 6,180,000 thousand for the 76-2nd guaranteed debentures.
[3] The Export-Import Bank of Korea provides guarantee up to maximum JPY 30,000,000 thousand for the 84th guaranteed debentures.
[4] The Export-Import Bank of Korea provided guarantee up to $300,000 thousand.

(4) Asset backed securitization ("ABS") loans as of March 31, 2019 and December 31, 2018, consist of the following:

(in millions of Korean won)

Description	Maturity	Annual interest rate	March 31, 2019	December 31, 2018
KAL-11th ABS	2019-02-14	-	₩ -	₩ 20,000
KAL-12th ABS	2019-05-07	4.74%	7,000	15,000
KAL-16th ABS	2020-01-28	3.98%	120,000	160,000
KAL-17th ABS	2019-04-29	1M LIBOR + 3.00%	6,321	24,847
KAL-18th ABS	2020-06-01	3M HIBOR + 3.74%	34,012	40,201
KAL-19th ABS	2021-07-11	4.24%	500,000	555,000
KAL-20th ABS	2019-12-27	2.01%	40,490	53,077
KAL-20Ath ABS	2019-12-27	2.01%	31,357	41,101
KAL-21th ABS	2022-04-07	4.63%	335,000	360,000
KAL-22th ABS	2023-01-26	4.36%	350,000	350,000
KAL-23th ABS	2021-10-27	3.95%	352,718	380,154
			1,776,898	1,999,380
	Less: current portion of ABS loans		(733,914)	(794,998)
			₩ 1,042,984	1,204,382

As of March 31, 2019, the Group provides the guarantee deposits of ₩121,311 million, JPY 2,354,547 thousand, $49,698 thousand and HKD 153,144 thousand in connection with repayments of the above ABS loans (Note 6).

The ABS loans are the borrowings to repay with future sales receivable that will be held at the time of selling the airline ticket in the future. The subject receivables and the period are as follows:

Description	Receivables	Period
Kal-12th ABS	Domestic passenger credit card sales receivable (NongHyup card and Lotte card)	2014.04.24- Of the following conditions, until the earlier date (i) 2019.05.07 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-16th ABS	Domestic passenger credit card sales receivable (BS card)	2015.01.20- Of the following conditions, until the earlier date (i) 2020.01.28 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-17th ABS	North America region cargo receivables (settlement of Cargo Accounts Settlements System("CASS"))	2016.04.11-When the ABS loan's principal and interest have been redeemed in total
Kal-18th ABS	Hong Kong and Singapore passenger sale receivable	2016.06.01-When the ABS loan's principal and interest have been redeemed in total
Kal-19th ABS	Korea region passenger cash sale receivable	2016.07.11- Of the following conditions, until the earlier date

		(i) 2021.07.11 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-20th ABS	Japan region passenger sales receivable	2016.12.29- Of the following conditions, until the earlier date (i) 2021.12.31 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-20Ath ABS	Japan region passenger sales receivable	2017.05.31- Of the following conditions, until the earlier date (i) 2021.12.31 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-21st ABS	Domestic passenger credit card sales receivable (Samsung card)	2017.03.30- Of the following conditions, until the earlier date (i) 2022.04.07 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-22nd ABS	Domestic passenger credit card sales receivable (Shinhan card)	2018.01.18- Of the following conditions, until the earlier date (i) 2023.01.26 (ii) When the ABS loan's principal and interest have been redeemed in total
Kal-23rd ABS	North America region passenger receivables (VISA and MASTER card)	2018.10.30- Of the following conditions, until the earlier date (i) 2021.10.27 (ii) When the ABS loan's principal and interest have been redeemed in total

22. Finance Lease Obligations

(1) Finance lease obligations as of March 31, 2019, and 2018, consist of the following:

(in millions of Korean won)

Lender	Annual interest rate	March 31, 2019	December 31, 2018
BEYOND 50 LIMITED	3M JPY LIBOR+1.03%	₩ 170,045	₩ -
Celestial Aviation Trading 21 Limited	2.69%	157,811	158,648
ECA-2014A Ltd.	3M LIBOR+0.94%	196,788	200,553
ECA-2014B Ltd.	3M EURIBOR+0.32% 3M LIBOR+2.85%	150,505	156,602
ECA-2015A Ltd.	3M EURIBOR+0.31% 3M LIBOR+2.85%~3.00%	191,098	198,050
ECA-2015B Ltd.	3M JPY LIBOR+0.30% 3M LIBOR+3.00%	107,475	109,486
EXPORT LEASING (2015) LLC	3M LIBOR+0.39%	122,082	123,978
EXPORT LEASING (2015-A) LLC	3M LIBOR+0.64%~0.66%	293,456	298,259
EXPORT LEASING (2015-B) LLC	3M LIBOR+0.66%~0.67%	296,167	301,068
EXPORT LEASING (2015-C) LLC	3M LIBOR+0.69%	151,362	153,814
EXPORT LEASING 2016-A	6M EURIBOR+1.05%	147,498	156,522
EXPORT LEASING 2016-B	3M TLIBOR+2.40% 5.55%	144,963	148,019
EXPORT LEASING 2016-C	3M LIBOR+0.90%	116,604	118,536
EXPORT LEASING INS (2017-A) LLC	6M LIBOR+1.25%~2.60%	294,225	295,914
EXPORT LEASING INS 2018 LLC	3M EURIBOR+0.90% 5.10%	165,874	171,101
EXPORT LEASING SECA (2018) LIMITED	3M JPY LIBOR+0.28% 3M EURIBOR+2.62%	316,672	321,465
EXPORT LEASING (2014) LLC	3M LIBOR+0.57%	125,395	127,657
HONG KONG AIRCRAFT LEASING I COMPANY LIMITED	2.63%	130,990	131,327
JAY LEASING 2017	2.45%~2.68% 3M LIBOR+2.70%	277,033	260,263
KALECA11 AVIATION Ltd.	3M LIBOR+0.85%	353,413	366,052
KALECA13 AVIATION Ltd.	3M EURIBOR+0.63%	123,775	128,391
KE DANOMIN AVIATION 2018	3M EURIBOR+1.56%	160,556	166,168
KE Export Leasing (2010) Ltd.	3M LIBOR+0.30%	151,853	159,925
KE Export Leasing (2011) Ltd.	3M LIBOR+0.25%	193,205	199,965
KE Export Leasing (2011-II) Ltd.	3M LIBOR+0.26%	139,068	142,818
KE Export Leasing (2012) Ltd.	3M LIBOR+1.05%	216,878	222,767
KE Export Leasing (2013-D) LLC	3M LIBOR+0.29%~0.58%	226,961	231,335
KEXPORT LEASING 2015	3M LIBOR+1.17%~1.17%	237,013	242,993
PC2018 Limited	3M LIBOR+1.95% 5.10%	169,092	170,749
Ray Aviation Limited	3M LIBOR+1.70%	129,982	133,768

	5.20%		
SKY HIGH LIV	3M LIBOR+2.20%	130,460	132,780
SKY HIGH LXX LEASING	3M LIBOR+1.60%~2.40%	303,852	307,639
Sky Leasing 2017-A	3M EURIBOR+2.25% 3M LIBOR+2.60%	122,663	127,022
Yian Limited	3M LIBOR+2.02%	130,800	134,206
KE Export Leasing (2013-C) and others	2.74%~9.57%	1,133,664	1,186,456
ALC BLARNEY AIRCRAFT LIMITED	4.06%	362,196	-
Celestial Aviation Trading 21 Limited	4.06%	268,182	-
Four Six Four Aircraft LAK (Ireland) II Limited	4.06%	130,922	-
Jin Shan 23 Ireland Company Limited	4.06%	129,208	-
Sky Aircraft B62694 Limited	4.06%	127,669	-
Four Six Four Aircraft LAK (Ireland) I Limited	4.06%	126,276	-
Sky Aircraft B62693 Limited	4.06%	125,813	-
Charleville Aircraft Leasing and others	4.06%	226,487	-
Incheon International Airport Corporation and others	2.60% ~ 5.10%	95,753	-
Cisco Systems Capital Korea	2.80%	2,182	2,311
		9,073,966	7,486,606
Less: current portion of obligation under finance leases, net of present value of discounts		(1,504,294)	(1,165,559)
		₩ 7,569,672	₩ 6,321,047

The Export-Import Bank of the United States and others have provided payment guarantees of $3,599 million for above finance lease obligations as of March 31, 2019. Also, the Group has provided payment guarantees of $104 million to Industrial & Commercial Bank of China, the beneficiary of the finance lease obligations due to Yian Limited, and $135 million to Industrial & Commercial Bank of China, the beneficiary of the finance lease obligations due to PC2018 Limited as of March 31, 2019.

(2) Minimum lease payments and present value of finance lease obligations as of March 31, 2019, consist of the following:

(in millions of Korean won)	**March 31, 2019**
Less than one year	₩ 1,708,715
Within one year to five years	5,605,566
More than five years	2,809,163
	10,123,444
Present value of discounts	(1,049,477)
	₩ 9,073,967

23. Employee Benefits

(1) Net defined benefit liabilities as of March 31, 2019, and December 31, 2018, consist of the following:

(in millions of Korean won)	March 31, 2019	December 31, 2018
Present value of defined benefit obligations	₩ 1,850,134	₩ 1,838,886
Fair value of plan assets	(336,936)	(344,899)
	₩ 1,513,198	₩ 1,493,987

(2) Changes in carrying amount of the net defined benefit liabilities for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	2019			2018		
	Present value of defined benefit obligations	Fair value of plan assets	Total	Present value of defined benefit obligations	Fair value of plan assets	Total
Beginning balance	₩ 1,838,885	₩ (344,898)	₩ 1,493,987	₩ 1,494,398	₩ (349,859)	₩ 1,144,539
Current service cost	40,139	-	40,139	32,977	-	32,977
Interest expense (income)	10,070	(1,825)	8,245	9,950	(2,280)	7,670
Remeasurement of the net defined benefit liabilities	-	566	566	3	1,525	1,528
Retirement benefits paid	(38,960)	9,232	(29,728)	(31,696)	8,272	(23,424)
Succession of defined	-	-	-	58	-	58
Contributions	-	(11)	(11)	-	-	-
Ending balance	₩ 1,850,134	₩ (336,936)	₩ 1,513,198	₩ 1,505,690	₩ (342,342)	₩ 1,163,348

24. Provisions

Changes in the provision liabilities for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	2019				
	Beginning balance	**Charged to profit or loss**	**Payment**	**Others**	**Ending Balance**
Current:					
Provision for construction loss[1]	₩ -	₩ 4	₩ -	₩ -	₩ 4
Provision for leased aircraft maintenance[3]	30,598	-	-	6,695	37,293
Provision for coupon for passenger flight tickets[4]	6,550	-	(815)	106	5,841
	37,148	4	(815)	6,801	43,138
Non-current:					
Provision for leased aircraft maintenance[3]	140,785	2,488	-	2,481	145,755
Others[5]	7,861	147	(3)	-	8,005
	148,646	2,635	(3)	2,481	153,760
	₩ 185,794	₩ 2,639	₩ (818)	₩ 9,282	₩ 196,898

(in millions of Korean won)	2018				
	Beginning balance	**Charged to profit or loss**	**Payment**	**Others**	**Ending Balance**
Current:					
Provision for construction loss[1]	₩ -	₩ -	₩ (1,667)	₩ 1,667	₩ -
Liability for greenhouse gas emissions[2]	5,462	576	-	-	6,038
	5,462	576	(1,667)	1,667	6,038
Non-current:					
Provision for leased aircraft maintenance[3]	119,175	12,763	-	-	131,938
Provision for coupon for passenger flight tickets[4]	11,090	-	(1,568)	(43)	9,479
Others[5]	7,496	82	-	-	7,578
	137,761	12,845	(1,568)	(43)	148,995
	₩ 143,223	₩ 13,421	₩ (3,235)	₩ 1,624	₩ 155,033

[1] The Group has recognized expected future construction loss of aerospace division as a provision for construction loss.

[2] The Group has recognized the estimated cost of greenhouse gas emission expected to exceed the

emission allowance for the year as liability for greenhouse gas emissions. For the three-month period ended March 31, 2019, the Group has completed the submission of the shortfall in the previous year to the government through purchase in the emission trading market.

[3] The Group has maintenance obligations related to the operating leases. In order to fulfill the obligations, the Group has recognized a provision for leased aircraft maintenance by estimating future maintenance costs as it is probable that an outflow of resources embodying economic benefits will be required to settle the obligations.

[4] The Group agreed to provide $26,000 thousand in flight ticket coupons to the plaintiff in relation to the U.S. Court class action on airline ticket price collusion of passenger flights and has recognized ₩5,842 million as a provision for passenger flight ticket coupons as of March 31, 2019 (Note 43).

[5] The Group has recognized ₩7,934 million as a provision for the restoration of forest due to the production of limestone and is provided with performance guarantees by Seoul Guarantee Insurance Co., Ltd (Note 43).

25. Deferred Revenue (Customer Loyalty Program)

The Group manages its frequent-flyer program ("FFP"), "SKYPASS," a customer loyalty program that provides incentives through accrued mileage, such as free flight tickets and to upgrade to the next tier, in addition to other benefits to its customers and alliance companies. The Group allocates the fair value of the consideration received in respect of the sales into the award credits and service revenue. The sales price allocated to award credits is not recognized as revenue until the obligation has been performed. The Group recognized deferred revenue relating to the FFP in the consolidated interim statement of financial position as of March 31, 2019 in amount of ₩2,283,849 million, including ₩106,571 million of advance receipts from customers and ₩2,177,278 million of deferred revenue which include the current portion amounts of ₩386,365 million.

26. Derivative Instruments

(1) As of March 31, 2019, the Group entered into derivative agreements with the Korea Development Bank and ten other financial institutions, and detail of derivatives financial instruments held for trading as of March 31, 2019, are as follows:

Type of transaction	Maturity	Contract amount	
Oil price option	2020.12.31	BBL	8,500 thousand
Interest rate swaps	2019.09.26	EUR	90,000 thousand
Cross currency-interest rate swaps	2023.06.12	JPY	47,638,329 thousand
	2020.12.11	EUR	266,904 thousand
	2027.11.17	KRW	1,070,285 million

(2) Impact on the consolidated interim financial statements in relation to derivatives as of and for the three-month period ended March 31, 2019, is as follows:

(in millions of Korean won)	2019					
	Statement of financial position		Statement of comprehensive income (loss)			
	Financial derivative assets	Financial derivative liabilities	Valuation gain	Valuation loss	Transaction gain	Transaction loss
Oil price option	₩ 7,592	₩ -	₩ 18,707	₩ -	₩ 2,143	₩ -
Interest rate swaps	-	10	14	-	14	-
Cross-currency interest rate swaps	18,580	16,562	28,094	556	12,757	79
	₩ 26,172	₩ 16,572	₩ 46,815	₩ 556	₩ 14,914	₩ 79

27. Other Liabilities

Other liabilities as of March 31, 2019, and December 31, 2018, consist of the following:

(in millions of Korean won)	March 31, 2019		December 31, 2018	
	Current	Non-current	Current	Non-current
Advances	₩ 1,465,930	₩ -	₩ 1,353,561	₩ -
Withholdings	149,753	63,967	123,506	64,922
Unearned revenues	302,979	-	304,533	-
Others	761	25,441	747	25,387
	₩ 1,919,423	₩ 89,408	₩ 1,782,347	₩ 90,309

28. Share Capital

(1) Share capital as of March 31, 2019, and December 31, 2018, consists of the following:

(in millions of Korean won, except share data)	Number of shares authorized	Number of shares issued		Par value		March 31, 2019		December 31, 2018
Common share	250,000,000	94,844,634	₩	5,000	₩	474,223	₩	474,223
Preferred share[1]		1,110,794		5,000		5,554		5,554
	250,000,000	95,955,428			₩	479,777	₩	479,777

[1] As the non-voting preferred share, in case of cash dividends, it gets 1% more dividends than common share. If the Parent Company cannot pay dividends, the preferred share gets voting right from the resolution of the next general meeting of shareholders that the Parent Company does not pay dividends until the resolution of the general meeting of shareholders that the Parent Company pays dividends.

(2) There is no change in number of shares issued and outstanding for the three-month periods ended March 31, 2019 and 2018.

29. Other Capital Surplus

(1) Other capital surplus as of March 31, 2019, and December 31, 2018, consists of the following:

(in millions of Korean won)		March 31, 2019		December 31, 2018
Additional paid-in capital	₩	719,665	₩	946,194
Treasury shares		(1)		(1)
Hybrid securities		701,113		701,113
Other capital surplus		72,843		72,844
	₩	1,493,620	₩	1,720,150

(2) Changes in additional paid-in capital for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		2019		2018
Beginning balance	₩	946,195	₩	946,195
Transfer to retained earnings[1]		(226,529)		-
Ending balance	₩	719,666	₩	946,195

[1] The Parent Company decided to transfer an amount of additional paid-in capital which is excess of 150% of the share capital to retained earnings in the annual general meeting of shareholders on March 27, 2019. Therefore, the additional paid-in capital of ₩226,529 million was transferred to retained earnings.

(3) There is no change in other capital for the three-month periods ended March 31, 2019 and 2018.

(4) Hybrid securities as of March 31, 2019, and December 31, 2018, consist of the following:

(in millions of Korean won)	Date of issue	Maturity	Interest rate	March 31, 2019	December 31, 2018
Registered guaranteed debenture[1]	2017.06.12	2047.06.12	6.88%	₩ 333,427	₩ 333,427
Unsecured bearer debenture[2]	2018.06.22	2048.06.22	5.40%	208,693	208,693
Unsecured bearer debenture[2]	2018.11.27	2048.11.27	5.40%	158,993	158,993
				₩ 701,113	₩ 701,113

[1] The interest rate is 6.88% for three and a half years after issuance. The Group enters into an EUR foreign exchange and swap contract to pay 4.88% interest annually to the swap bank and receive 6.88% interest from the swap bank. Therefore, except for exchange rate fluctuations, the Group's actual interest rate is 4.88% per annum for the three and half years after issuance. After three and a half years of issuance, annual interest rate will be applied as US Treasury bond rate + additional rate (5.44%) + 5%. The Group can exercise the right of early repayment every six month after three and a half years of the securities issuance. If notice of willingness to extend maturity is notified one month prior to the maturity date, maturity can be extended for 30 years under the same condition.

[2] The interest rate is 5.40% during two years from issuance, and the increased interest rate (5.40% + 2.50% + the national treasury bond rate after two years - the national bond rate at issuance per annum) is applied after the two years. The increased interest rate (interest rate applied right before year end + 0.5% per annum) is applied after three years. The Group may exercise the right of annual advance redemption from two years of the hybrid securities issuance. If notice of willingness to extend maturity is notified 30 days prior to the maturity date, maturity can be extended for 30 years under the same condition. In addition, the Group can choose to not pay the interest on hybrid securities based on the decision to extend maturity. However, the Group cannot suspend payment of the interest if the decision on share dividend, purchase and redemption of shares, and profit retirement occurred in the last 12 months.

30. Retained Earnings and Dividends

(1) Retained earnings as of March 31, 2019, and December 31, 2018, consist of the following:

(in millions of Korean won)	March 31, 2019	December 31, 2018
Legal reserve [1]	₩ 8,261	₩ 5,856
Unappropriated retained earnings	208,210	75,905
	₩ 216,471	₩ 81,761

[1] The Korean Commercial Code requires the Group to appropriate as legal reserve an amount equal to at least 10% of cash dividends paid for each accounting period until the reserve equals 50% of the stated capital. The legal reserve may be used to reduce a deficit or transferred to share capital.

(2) Changes in retained earnings for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		**2019**		**2018**
Beginning balance	₩	81,761	₩	576,675
Effect of changes in accounting policies		129		(44,728)
Loss for the period		(62,515)		(10,346)
Re-measurement of the net defined benefit liabilities		(376)		(1,013)
Transfer of revaluation surplus		-		29,247
Dividends for hybrid securities		(4,999)		(12,805)
Cash dividends		(24,044)		(24,044)
Transfer of additional paid-in capital		226,530		-
Others		(15)		(33)
Ending balance	₩	216,471	₩	512,953

(3) Details of the dividend payment for the three-month periods ended March 31, 2019 and 2018, are as follows:

	2019				**2018**			
(in millions of Korean won, except share data value)		**Common shares**		**Preferred shares**		**Common shares**		**Preferred shares**
Number of shares		94,844,611		1,110,792		94,844,614		1,110,793
Par value	₩	5,000	₩	5,000	₩	5,000	₩	5,000
Dividend rate		5%		6%		5%		6%
Dividend	₩	23,711	₩	333	₩	23,711	₩	333

In addition to the above cash dividend, the Parent Company paid dividend for hybrid securities for the three-month periods ended March 31, 2019 and 2018.

31. Other Capital Components

(1) Other capital components as of March 31, 2019, and December 31, 2018, consist of the following:

(in millions of Korean won)		**March 31, 2019**		**December 31, 2018**
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	₩	41,794	₩	36,777

Share of other comprehensive income (loss) of associates, net of tax		(449)		(554)
Foreign currency translation adjustments		(21,632)		(31,584)
Revaluation surplus		616,518		616,518
		636,231		621,157
Assets held for sale:				
Revaluation surplus		5,876		5,876
	₩	642,107	₩	627,033

(2) Gain on valuation of financial assets at fair value through other comprehensive income, net of tax

Changes in equity instruments classified as gain on valuation of financial assets at fair value through other comprehensive income, net of tax, for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		2019		2018
Beginning balance	₩	36,777	₩	68,440
Effects of changes in accounting policies		-		(5,726)
Remeasurements (fair value option)		6,785		(10,423)
Tax effect of remeasurements		(1,768)		(2,522)
Ending balance	₩	41,794	₩	49,769

For the investments revaluation reserve in equity instruments at fair value through other comprehensive income, the equity instruments are stated as the net amounts of accumulated revaluation deducted directly from the amounts of retained earnings transferred arising from derecognition of equity instruments.

Equity instruments at fair value through other comprehensive income are not subject to impairment.

32. Revenue from Contracts with Customers and Relevant Contract Assets and Libilities

(1) The Group has recognized the following amounts relating to revenue from contracts with customers:

(in millions of Korean won)		2019		2018
Revenue from contracts with customers	₩	3,111,659	₩	3,065,347
Revenue from other sources: rental and sub-lease rental income		27,263		36,655
Total revenue	₩	3,138,922	₩	3,102,002

(2) Disaggregation of revenue from contracts with customers

The Group derives revenue from the transfer of goods and services over time and at a point in time in the following segments:

(in millions of Korean won)	2019			
	Air transport	**Aerospace**	**Others**	**Total**
At a point in time	₩ 2,857,407	₩ 172,596	₩ 72,096	₩ 3,102,099
Over time	-	6,329	3,231	9,560
	₩ 2,857,407	₩ 178,925	₩ 75,328	₩ 3,111,659

(in millions of Korean won)	2018			
	Air transport	**Aerospace**	**Others**	**Total**
At a point in time	₩ 2,832,317	₩ 136,269	₩ 72,561	₩ 3,041,147
Over time	-	22,516	1,684	24,200
	₩ 2,832,317	₩ 158,785	₩ 74,245	₩ 3,065,347

(3) The Group has recognized the following assets and liabilities related to contracts with customers:

(in millions of Korean won)	**March 31, 2019**	**December 31, 2018**
Contract assets[1]	₩ 68,089	₩ 65,711
Contract liabilities[2]	₩ 1,308,898	₩ 1,139,059

[1] Contract assets are included in amount due from customers for contact work and accrued revenues.

[2] Contract liabilities are included in amount due to customers for contract work and advance receipts from customers.

33. Selling and Administrative Expenses

Selling and administrative expenses for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	**2019**	**2018**
Salaries	₩ 68,926	₩ 71,365
Retirement and severance benefits	9,017	8,582
Depreciation and rental	62,758	7,427
Amortization	3,186	4,595
Sales commission	100,064	106,763
Advertising	12,102	29,559
Welfare	15,865	27,285

Training		2,097		1,805
Communications		6,726		6,750
Taxes and dues		3,253		4,633
Facility maintenance		3,130		5,502
Commission		47,612		44,525
Others		18,452		21,540
	₩	353,188	₩	340,331

34. Finance Income and Costs

(1) Finance income for the three-month periods ended March 31, 2019 and 2018, is as follows:

(in millions of Korean won)		2019		2018
Interest income	₩	14,878	₩	9,530
Dividend income		4,467		3,887
Gain on valuation of derivatives		46,816		52
Gain on derivative transactions		14,915		3,433
	₩	81,076	₩	16,902

(2) Finance costs for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		2019		2018
Interest expense	₩	160,974	₩	121,574
Loss on valuation of derivatives		556		36,199
Loss on derivative transactions		79		206
	₩	161,609	₩	157,978

35. Other Non-operating Income and Expenses

(1) Other non-operating income for the three-month periods ended March 31, 2019 and 2018, consists of the following:

(in millions of Korean won)		2019		2018
Gain on foreign currency transaction	₩	27,964	₩	42,855
Gain on foreign currency translation		44,359		74,924
Reversal of allowance for other doubtful accounts		166		583
Gain on disposal of property, aircraft and equipment		943		7,592
Gain on disposal of assets held for sale		-		30,295
Miscellaneous income		41,421		5,781
	₩	114,853	₩	162,030

(2) Other non-operating expenses for the three-month periods ended March 31, 2019 and 2018, consist

of the following:

(in millions of Korean won)		**2019**		**2018**
Other bad debt expenses	₩	(251)	₩	149
Loss on foreign currency transaction		28,063		58,479
Loss on foreign currency translation		191,549		74,221
Loss on disposal of property, aircraft and equipment		161		18,756
Impairment loss on disposal of property, aircraft and equipment		-		15,549
Donation		9,263		9,899
Miscellaneous loss		13,629		11,669
	₩	242,414	₩	188,722

36. Income Tax Expenses

Income tax expense is recognized based on the best estimate of the weighted average annual income tax rate for the full fiscal year. The income tax benefit of ₩5,432 million for the three-month period ended March 31, 2019 (income tax expense for the three-month period ended March 31, 2018 : ₩8,951 million) is recognized due to changes in current tax and temporary differences.

37. Classification of Expenses by Nature

Expenses classified by nature for the three-month periods ended March 31, 2019 and 2018, consist of the following:

(in millions of Korean won)		2019		2018
Salaries and retirement benefit costs	₩	491,633	₩	469,698
Welfare		85,318		136,537
Depreciation and amortization		518,654		428,327
Rental		6,571		86,661
Fuel and oil charges		721,743		726,346
Airport-related costs		291,435		266,815
Sales commission		100,064		106,763
Others		782,921		714,515
Total[1]	₩	2,998,339	₩	2,935,662

[1] The amount is the sum of cost of sales and selling and administrative expenses from continuing operation in consolidated interim statements of comprehensive income (loss).

38. Earnings (Loss) per Share

Basic loss per share for the three-month periods ended March 31, 2019 and 2018, is as follows:

(1) Common shares

(in thousands of Korean won, except per share data)		2019		2018
Loss attributable to owners of the Parent Company	₩	(62,515,259)	₩	(10,346,099)
Loss attributable to common shares		(61,846,471)		(10,281,228)
Weighted average number of common shares outstanding		94,844,611		94,844,613
Loss per common shares[1]	₩	(652)	₩	(108)

[1] Diluted loss per share for the three-month periods ended March 31, 2019 and 2018, are the same as the basic loss per share, as there are no dilutive potential common shares and dilutive effect.

(2) Preferred shares

(in thousands of Korean won, except share data)		2019		2018
Loss attributable to owners of the Parent Company	₩	(62,515,259)	₩	(10,346,099)
Loss attributable to preferred shares		(668,788)		(64,871)
Weighted average number of preferred shares outstanding		1,110,792		1,110,794
Loss per preferred share [1]	₩	(602)	₩	(58)

39. Financial Instruments

(1) Capital risk management

The purpose of capital risk management is to protect the ability to continuously provide profits to shareholders and maintain optimum capital structure to reduce capital expenses. The Group's capital risk management objectives and policies are consistent with those disclosed in the consolidated financial statements as of and for the year ended December 31, 2018.

(2) Financial risk management

1) Financial risk

The financial sector manages the Group's business and organizes the approach to the domestic and international financial markets. Furthermore, it monitors and manages the financial risk related to the Group's business through internal risk reports, which analyze the scope and scale of each risk. These risks include the market risk (including currency risk, interest rate risk, oil price fluctuation risk and price risk), credit risk and liquidity risk. The Group's financial risk management objectives and policies are consistent with those disclosed in the consolidated financial statements as of and for the year ended December 31, 2018.

2) Risk aversion

The Group has made contracts for derivative instruments to avoid the change of exchange rate risk, interest rate risk and oil price fluctuation risk.

3) Credit risk management

There is no significant change in the degree of exposure of the maximum credit risk in comparison with the previous period, except for the maximum amount of ₩271,067 million, which is to be paid by the warrantee claims under the financial guarantee contracts.

4) Liquidity risk management

There is no significant change in undiscounted net cash inflows and outflows in comparison with the previous period.

40. Fair Value of Financial Instruments

(1) Financial instruments that are measured subsequent to initial recognition at fair value are categorized into Level 1, Level 2 and Level 3, and fair value measurements of financial instruments by fair value hierarchy level as of March 31, 2019, and December 31, 2018, are as follows. Fair value hierarchy is based on the degree to which the fair value is observable as follows:

- (Level 1) Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- (Level 2) Inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- (Level 3) Inputs are unobservable inputs for the asset or liability.

(in millions of Korean won)	March 31, 2019			
	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss:				
Beneficiary certificates	₩ -	₩ -	₩ 7,000	₩ 7,000
Investments in other equity securities	-	-	16,120	16,120
Derivative financial assets	-	26,171	-	26,171
Financial assets at fair value through other comprehensive income:				
Listed securities	107,242	-	-	107,242
Unlisted securities	-	-	48,338	48,338
	₩ 107,242	₩ 26,171	₩ 71,458	₩ 204,872
Financial liabilities at fair value through profit or loss:				
Derivative financial liabilities	₩ -	₩ 16,572	₩ -	₩ 16,572

(in millions of Korean won)	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss:				
Beneficiary certificates	₩ -	₩ -	₩ 5,600	₩ 5,600
Investments in other equity securities	-	-	16,120	16,120
Derivative financial assets	-	14,022	-	14,022
Financial assets at fair value through other comprehensive income:				
Listed securities	99,875	-	-	99,875
Unlisted securities	-	-	48,338	48,338
	₩ 99,875	₩ 14,022	₩ 70,058	₩ 183,955

Financial liabilities at fair value through profit or loss:				
Derivative financial liabilities	₩ –	₩ 55,182	₩ -	₩ 55,182

There is no significant changes between Level 1 and Level 2 for the three-month periods ended March 31, 2019 and 2018.

(2) The management of the Group considers that the carrying amounts of financial assets and financial liabilities recognized at amortized cost in the condensed consolidated interim financial statements approximate their fair values.

(3) As of March 31, 2019, valuation techniques and inputs used for fair value measurements and disclosed fair value that are categorized within Levels 2 and Level 3 of the fair value hierachy are as follows :

(in millions of Korean won)	March 31, 2019 Fair Value	Valuation technique	Significant unobservable inputs	Description of relationships
Derivative financial assets (Note 26)	₩ 26,171		N/A	N/A
Derivative financial liabilities (Note 26)	16,572		N/A	N/A
Financial assets at fair value (Note 8)	71,458	Discounted cash flows and others	Sales growth rate, pre-tax operating profit ratio and weighted-average cost of capital	Fair value of non-listed shares will increase if the weighted-average cost of capital is reduced along with the increase in pre-tax operating profit ratio and sales growth rate.

(4) Changes in financial instruments that are measured at fair value on a recurring basis and classified as Level 3 for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)	2019				
	Beginning balance	Purchase	Disposal	Other comprehen-sive income	Ending Balance
Financial assets at fair value	₩ 70,058	₩ 1,400	₩ -	₩ -	₩ 71,458

(in millions of Korean won)	2018				
	Beginning balance	Purchase	Disposal	Other comprehen-sive income	Ending Balance

Financial assets at fair value	₩	53,990	₩	1,400	₩	-	₩	21,299	₩	76,689

(5) The Group recognizes transfers between levels of the fair value hierarchy at the time of the event or change in circumstances that caused the transfer. In addition, there is no change in the valuation techniques that have been used to measure the fair value of financial instruments classified as Level 2 and Level 3 for the three-month period ended March 31, 2019.

41. Related Party Transactions

(1) The list of related parties of the Group as of March 31, 2019, is as follows:

Relationships	Related parties
Significant influence over the Group	Hanjin KAL Co., Ltd.
Associate	Hanjin Int'l Japan Co., Ltd.
Other related parties	Jin Air Co., Ltd., KAL Hotel Network Co., Ltd., Topas Co., Ltd., Jungseok Enterprise Co., Ltd., Hanjin Travel Service Co., Ltd., Jedong Leisure Co., Ltd., Waikiki Resort Hotel Inc., etc.
Affiliated companies of a conglomerate and others[1]	Hanjin Transportation Co., Ltd., Jungseok-Inha School's Foundation, TAE IL CO., LTD., Jungseok Logistics Foundation, Pyeongtaek Container Terminal Co., Ltd., Pohang Port 7th Terminal Operating Co., LTD., WAC INTERNATIONAL LOGISTICS CO., LTD., HANJIN INCHEON CONTAINER TERMINAL CO.,LTD., Taeil Catering Co., Ltd., HANJIN ULSAN NEWPORT OPERATION CO., LTD., Chungwon Freez Co., Ltd., WAC Air Service Co., Ltd., etc.

[1] These companies are not related parties as defined in paragraph 9 of Korean IFRS 1024. However, affiliated companies of a conglomerate and others designated by the Fair Trade Commission are classified as related parties.

(2) Significant transactions with related parties (except for treasury and equity transactions) for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		2019	
		Sales and others	**Purchases and others**
Significant influence over the Group	Hanjin KAL Co., Ltd.	₩ 218	₩ 15,598
Associate	Hanjin Int'l Japan Co., Ltd.	37	5,403
Other related parties	Jin Air Co., Ltd.	77,379	770
	KAL Hotel Network Co., Ltd.	5,633	11,267
	Topas Co., Ltd.	2,035	9
	Jungseok Enterprise Co., Ltd.	55	706
	Hanjin Travel Service Co., Ltd.	301	949
	Others	4	682
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	3,713	10,699
	Jungseok-Inha School's Foundation	2,648	6,925
	Others[1]	1,699	5,222

[1] Transactions between companies excluding Hanjin Transportation Co., Ltd. and Jungseok-Inha School's Foundation, classified as 'Affiliated companies of a conglomerate and others' in (1), are included.

(in millions of Korean won)		2018	
		Sales and others	**Purchases and others**
Significant influence over the Group	Hanjin KAL Co., Ltd.	₩ 75	₩ 15,118
Associates	Hanjin Int'l Japan Co., Ltd.	-	5,427
	Czech Airlines j.s.c.[1]	3,464	2,702
Other related parties	Jin Air Co., Ltd.	66,779	1,204
	KAL Hotel Network Co., Ltd.	5,548	9,620
	Topas Co., Ltd.	1,863	12
	Jungseok Enterprise Co., Ltd.	55	607
	Hanjin Travel Service Co., Ltd.	292	1,213
	Others	4	706
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	3,488	10,223
	Jungseok-Inha School's Foundation	1,643	7,534
	Others	659	8,887

[1] It is including the transactions occurred before disposal of Czech Airlines j.s.c. for the three-month

period ended March 31, 2018.

(3) Significant receivables from and payables to the related parties (except for loan and borrowing transactions) as of March 31, 2019, and December 31, 2018, are as follows:

(in millions of Korean won)		March 31, 2019	
		Trade and other receivables	**Trade and other payables**
Significant influence over the Group	Hanjin KAL Co., Ltd.	₩ 2,297	₩ 14,369
Associate	Hanjin Int'l Japan Co., Ltd.	-	4,010
Other related parties	Jin Air Co., Ltd.	133,007	31,875
	KAL Hotel Network Co., Ltd.	3,841	3,972
	Topas Co., Ltd.	952	1,121
	Jungseok Enterprise Co., Ltd.	456	12,507
	Hanjin Travel Service Co., Ltd.	10,977	1,161
	Others	3	906
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	2,004	6,280
	Others[1]	4,898	2,690

(in millions of Korean won)		December 31, 2018	
		Trade and other receivables	**Trade and other payables**
Significant influence over the Group	Hanjin KAL Co., Ltd.	₩ 2,295	₩ 7,565
Other related parties	Jin Air Co., Ltd.	49,640	45,068
	KAL Hotel Network Co., Ltd.	4,309	5,090
	Topas Co., Ltd.	872	1,150
	Jungseok Enterprise Co., Ltd.	703	11,474
	Hanjin Travel Service Co., Ltd.	349	1,025
	Others	3	939
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	2,206	7,346
	Others[1]	762	4,670

(4) There was no share transaction with related parties for the three-month periods ended March 31, 2019 and 2018.

(5) The compensation paid or payable to key management for the three-month periods ended March 31, 2019 and 2018, is as follows:

(in millions of Korean won)		**2019**		**2018**
Wages and salaries	₩	1,020	₩	2,131
Retirement benefit costs		633		653
	₩	1,654	₩	2,784

42. Cash Flows

The significant non-cash transactions from investing and financing activities that are not included in the consolidated interim statements of cash flows for the three-month periods ended March 31, 2019 and 2018, are as follows:

(in millions of Korean won)		**2019**		**2018**
Transfer of long-term borrowings to current portion of long-term borrowings	₩	376,351	₩	250,017
Transfer of debentures to current portion of debentures		15,672		226,947
Transfer of finance lease obligation to current portion of finance lease obligation		424,847		6,871
Transfer of construction in progress to property, aircraft and equipment		363,003		788,681
Acquisition of finance lease assets		191,627		243,070
Transfer of finance lease obligations to finance lease receivables		263,312		-
Acquisition of right-of-use assets		16,131		-
	₩	1,650,943	₩	1,515,586

43. Commitments and Contingencies

(1) The Group has been provided the following guarantees by others as of March 31, 2019:

(in millions of Korean won and in thousands of US dollars)		**March 31, 2019**
Seoul Guarantee Insurance Co., Ltd.	₩	11,867
Korea Defense Industry Association	₩	993,150
HSBC Australia and others	₩	22,969
Engineering Financial Cooperative	₩	38,409
Korea Software Financial Cooperative	₩	9,926
Information & Communication Financial Cooperative	₩	₩100
BBCN BANK	$	4,146

As of March 31, 2019, the Group has been provided with a payment guarantee (limit: $ 3,000 thousand) for the purchase of facilities from Hana Bank. Also, the Group has been provided with a guarantee amounting to ₩18,958 million from Seoul Guarantee Insurance Co., Ltd. in relation to the restoration of forest due to the production of limestone. The Group has been provide with a payment guarantee amounting to ₩1,749 million from Shinhan Bank in relation to the rental for C cargo service facilities located in cargo terminal in Incheon.

(2) The Group provides a guarantee of ₩902 million in relation to the personal loan of flight training center trainees.

(3) Credit line and details of credit agreements as of March 31, 2019, are as follows:

(in millions of Korean won and in thousands of US dollars)

Description	Financial institutions		March 31, 2019
Credit line agreement	BANK OF CHINA and others	$	105,000
	NongHyup Bank and others	₩	130,000
Letters of credit	Hana Bank	$	1,000
Ordinary loan	Shinhan Bank	₩	10,000
Line of credit	NongHyup Bank	₩	10,000
Facility loan	Korean Resource Corporation	₩	760
		$	106,000
		₩	150,760

(4) Promissory note pledged as collateral

As of March 31, 2019, the Group has provided one outstanding blank promissory note pledged as collateral to the Korea Defense Industry Association.

(5) Pending litigations and others

The Group agreed to provide $26,000 thousand in flight ticket coupons to the plaintiffs in the U.S. Court class action related to airline ticket price collusion of passenger flights and has recognized ₩5,842 million as a provision for passenger flight ticket coupons as of March 31, 2019.

As of March 31, 2019, various claims, lawsuits and complaints arising from airline service operations are pending against the Group and the ultimate outcome of these cases is unpredictable. Management believes that the ultimate outcome of these cases will not have any material adverse effect on the financial performance and position of the Group.

(6) New aircraft introduction plan

The Group has entered into various contracts with manufacturers, such as the Boeing Company, to purchase aircraft. The amount of such contracts is approximately $3,630 million as of March 31, 2019.

(7) Passenger terminal joint use agreement

The Group and three other airlines, including Air France, entered into a passenger terminal joint use agreement with the JFK Airport in New York and established Terminal One Group Association ("TOGA") to cooperate one of the new terminals of JFK Airport. TOGA may have to repay bond issued by New York Transportation Development Corporation based on terminal lease revenue, and the Group and three other airlines have provided TOGA with a joint guarantee up to $103 million for each terminal usage fee.

(8) Financial structure improvement agreement

The Parent Company is a major entity of Hanjin conglomerate group (the "Hanjin Group"), and the Hanjin Group has been selected and included in the main debtor group by Finance Supervisory Service. In May 2009, the Parent Company entered into financial structure improvement agreement with main creditor bank of the Hanjin Group, Korea Development Bank, as a debtor. The Hanjin Group members entities extended the financial structure improvement agreement and reformed its self-helping plan (the "Plan") on September 29, 2017. The Parent Company exceed ₩51.2 billion than the Plan through disposal of aged aircraft and real estates, and share offering as of December 31, 2018. The Hanjin Group and the Parent Company, plan to further develop and implement the Plan going forward.

(9) Major agreements entered into by the subsidiaries are as follows:

1) Korea Airport Service Co., Ltd., a subsidiary of the Company, was contributed certain ground-handling facilities constructed at the Incheon International Airport, in accordance with the agreement with the Ministry of Construction and Transportation dated March 9, 2001, in exchange for usage rights to the contributed facilities for 20 years.

2) On March 30, 2011, WLD, a subsidiary of the Company, entered into an agreement on "Wang San Marina Business" with Incheon Metropolitan City and Yongyu-muui Project Management Co., Ltd. Details of the agreement are summarized as follows:

- Location: 980 Eulwang-dong, Jung-gu, Incheon, Korea
- Business content: Construction of yacht tournament course held in the 2014 Incheon Asian Games
- Total amount of investment: Approximately ₩230.9 billion
- Local government subsidy: Incheon Metropolitan City government agreed to provide a total of ₩16.7 billion as financial subsidy depending on the construction progress.

WLD accomplished timely development of Wang San Marina Business, including construction of the 2014 Incheon Asian Games yacht tournament course; cooperated for successful host and operation of yacht tournament at The 2014 Incheon Asian Games; and invested rest of the amount after excluding Wang San Marina Business operating expenses granted by the government, construction costs of access road and other infrastructure costs. The marina was completed in August 2016, and

WLD has been fully open since June 2017. WLD has entered into a contract for repayment of property rights, and the transfer of ownership rights was completed in July 2017. WLD is granted at least 30 years of operating rights after completion of construction of Wang San Marina facilities.

Also, the Parent Company made a commitment with the Korean Development Bank to participate in paid-in capital increase of Wangsan Leisure Development Co., Ltd., if WLD is short of financial resources to repay the borrowings provided by the Korean Development Bank. The outstanding balance of borrowings is ₩63,623 million as of March 31, 2019. The deposits, land and buildings acquired under the purpose of Wang San Marina Business are pledged to Korea Development Bank as collateral.

3) On June 30, 2011, IAT, a subsidiary of the Company, entered into an agreement with Korea Land & Housing Corporation and Inchon Development & Tourism Corporation about a project related to the "Attraction of Incheon Free Economic Zone, Yeongjong Sky City Airways Airplane Engine Maintenance Centre." Major terms of the agreement include investment of ₩120 billion by IAT for construction of an airplane engine maintenance center and acquisition of related land located at 779-11 Unbuk-dong, Jung-gu, Incheon, Korea.

As of March 31, 2019, preferred shares of IAT, as cumulative and non-participative, will be converted proportionately to one common share per one preferred share on February 1, 2022 (the "conversion date"). However, 7% of dividend is guaranteed for preferred shareholders until the conversion date, and in case of dividend in arrears, preferred shareholders have a right to refuse conversion until the dividend in arrears is paid. In accordance with the ones described above, the subsidiary classifies the amount asked by preferred shareholders at conversion date as liability, which is discounted for present value.

The Group has a call option for six months from August 1, 2021, to January 31, 2022, to buy the preferred shares held by United Technologies International Corporation-Asia Private Ltd., a preferred shareholder of IAT, and the preferred shareholder of IAT, also has a put option to sell the preferred shares to the Group during that period.

44. Assets Held for Sale

Assets held for sale as of March 31, 2019, and December 31, 2018, are as follows:

(in millions of Korean won)		**March 31, 2019**		**December 31, 2018**
Land	₩	11,365	₩	11,365
Buildings		672		672
	₩	12,037	₩	12,037

45. Subsequent events

The Parent Company has issued the 85-1st and 85-2nd unregistered non-guaranteed public debentures of ₩300,000 million subsequent to March 31, 2019.

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Independent Auditors' Report

English Translation of Independent Auditors' Report Originally Issued in Korean on March 19, 2019.

To the Shareholders and Directors of
Korean Air Lines Co., Ltd.:

Our Opinion

We have audited the accompanying consolidated financial statements of Korean Air Lines Co., Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and December 31, 2017, respectively, and the consolidated statements of profit or loss, the consolidated statements of comprehensive income (loss), consolidated statements of changes in shareholders' equity and consolidated statements of cash flows, for the years then ended, and a summary of significant accounting policies and other explanatory information.

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Group as of December 31, 2018, and December 31, 2017, respectively, and its financial performance and its cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Audit Opinion

We conducted our audits in accordance with the Korean Standards on Auditing ("KSAs"). Auditor's 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 Group in accordance with the ethical requirements, including those related to independence, that are relevant to our audit of the consolidated financial statements in the Republic of Korea as required by prevailing audit regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

The key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon, and we do not provide a separate opinion on these matters.

1) Recognition of deferred revenue

As stated in Note 25 on consolidated financial statements, the Group is operating a customer loyalty program called "SKYPASS" which provides benefits such as accumulation of free mileage, bonus tickets and free seat upgrades in order to reward customers of the Group and its affiliated group. The Group's deferred income in connection with the SKYPASS system recognized in the consolidated statements of financial position as of December 31, 2018, amounted to ₩2,278,701 million ($2,038,011 thousand), including ₩87,740 million ($78,472 thousand) of advance receipts from customers and ₩2,190,961 million ($1,959,539 thousand (including current portion of deferred revenue of ₩422,396 million ($377,780 thousand))) of deferred revenue.

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Accounting for deferred revenue is heavily influenced by important assumptions, such as estimating future expected usage using historical mileage exhaustion experience rates and estimating the individual selling prices of mileage. In addition, it is deemed that this estimation process involves the management's high subjectivity, such as determining the statistical methodology for estimating mileage and expected usage and determining inputs for estimating individual selling prices. Accordingly, we decided that this item was a key audit matter considering the possibility of management's intention to intervene in these management estimates.

The major audit procedures we have conducted in relation to the key assumptions used by management in estimating deferred revenue and the carrying amount of deferred income at the end of the current period are as follows:

- Understanding and assessing whether the Group's deferred revenue accounting policies conform to accounting principles generally accepted in the Republic of Korea

- Evaluating the appropriateness of internal control design related to deferred revenue recognition, and mileage accumulation and redemption

- Evaluating the appropriateness of the design and operating effectiveness of general and automated IT controls of the mileage operation system(Skypass) utilizing IT specialists

- Verifying the occurrence of mileage accumulation and redemption during the current period, through sampling method

- Assessing the rationality of the statistical methodology used to estimate the expected mileage redemption rate utilizing statistical specialists

- Verifying and recalculating input variables used by the Group for estimating the individual selling price of mileage

- Recalculating major assumptions and remaining mileage data used by the Group

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

Management is responsible for the preparation of the accompanying consolidated financial statements in accordance with K-IFRS, and for such internal control as they determine 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 of the Group 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, or has no realistic alternative, but to do so.

Those charged with governance’s responsibilities include overseeing the Group’s financial reporting process.

Auditor’s Responsibilities for the Audit of the 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 KSAs 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.

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As part of an audit in accordance with KSAs, 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, 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 the 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 are solely responsible for our audit opinion.

We communicate with those charged with governance of the Group 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.

We also provide with those charged with governance of the Group with a statement that we have complied with relevant ethical requirements, including those related to independence, and to communicate with them all matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Deloitte Anjin LLC

March 19, 2019

<u>Notice to Readers</u>

This report is effective as of March 19, 2019, the auditors' report date. Certain subsequent events or circumstances may have occurred between the auditors' report date and the time the auditors' report is read. Such events or circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to the auditors' report.

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

AS OF DECEMBER 31, 2018 AND 2017

		Korean won		Translation into U.S. dollars (Note 2)	
ASSETS	NOTES	2018	2017	2018	2017
		(In millions)		(In thousands)	
CURRENT ASSETS:					
Cash and cash equivalents	5,6,21,39	₩ 1,503,951	₩ 761,235	$ 1,345,096	$ 680,829
Short-term financial instruments	6,39	236,731	510,546	211,726	456,619
Current portion of finance lease receivables	11,16,39	29,634	61,156	26,504	54,697
Trade and other receivables	7,39,40	844,155	757,013	754,990	677,053
Amount due from customers for contract work	44	39,175	207,454	35,037	185,542
Current portion of held-to-maturity investments	39	-	718	-	643
Current portion of financial assets at amortized cost	39	35	-	31	-
Inventories	10	1,030,116	682,687	921,309	610,578
Current tax assets		220	151	196	135
Current portion of financial derivative assets	26,39	1,065	126	953	112
Other financial assets	9,39	10	15	9	13
Other current assets	19	175,244	462,318	156,734	413,486
Assets held for sale	45	12,037	138,883	10,765	124,213
Total current assets		3,872,373	3,582,302	3,463,350	3,203,920
NON-CURRENT ASSETS:					
Long-term financial instruments	6,39	1,653	5,582	1,478	4,992
Long-term trade and other receivables	7,39	40	50	36	45
AFS financial assets	8,39	-	202,169	-	180,815
Financial assets at FV	6,8,39	169,933	-	151,984	-
Held-to-maturity investments	39	-	319	-	285
Financial assets at amortized cost	39	291	-	260	-
Finance lease receivables	11,16,39	99,329	95,874	88,837	85,747
Investments in associates	13,40	6,759	5,836	6,045	5,219
Property, aircraft and equipment	14,15,16	19,648,002	18,907,294	17,572,670	16,910,199
Investment properties	16,17	330,060	322,345	295,197	288,297
Intangible assets	16,18	300,762	363,496	268,994	325,102
Financial derivative assets	26,39	12,956	-	11,588	-
Other financial assets	9,39	210,852	262,351	188,580	234,640
Deferred tax assets	36	823,676	700,143	736,675	626,190
Other non-current assets	19	102,967	200,913	92,091	179,691
Total non-current assets		21,707,280	21,066,372	19,414,435	18,841,222
Total assets		₩ 25,579,653	₩ 24,648,674	$ 22,877,785	$ 22,045,142

(Continued)

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION (CONTINUED)

AS OF DECEMBER 31, 2018 AND 2017

LIABILITIES AND SHAREHOLDERS' EQUITY	NOTES	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
		(In millions)		(In thousands)	
CURRENT LIABILITIES:					
Trade and other payables	20,39,40	₩ 947,806	₩ 917,970	$ 847,693	$ 821,009
Short-term borrowings	16,21,39	732,311	772,625	654,960	691,016
Short-term debentures	21	-	69,924	-	62,538
Current portion of long-term borrowings	6,16,21,39	2,423,309	2,122,133	2,167,345	1,897,981
Current portion of finance lease obligations	16,22,39	1,165,558	1,178,332	1,042,446	1,053,870
Current portion of financial derivative liabilities	26,39	5,283	42	4,725	37
Current portion of provisions	24,43	37,148	5,462	33,224	4,885
Current portion of deferred revenue	25	422,396	-	377,780	-
Amount due to customers for contract work	44	3,379	39,689	3,022	35,497
Current tax liabilities		2,326	34,737	2,080	31,068
Other current liabilities	25,27	1,782,347	1,497,209	1,594,086	1,339,066
Total current liabilities		7,521,863	6,638,123	6,727,361	5,936,967
NON-CURRENT LIABILITIES:					
Long-term trade and other payables	20,39,40	21,323	21,667	19,070	19,378
Long-term borrowings	16,21,39	2,373,633	1,941,915	2,122,917	1,736,799
Debentures	21,39	1,518,959	1,102,989	1,358,518	986,485
Asset-backed securitization ("ABS") loans	6,21,39	1,204,382	1,260,629	1,077,169	1,127,474
Finance lease obligations	16,22,39	6,321,047	6,396,796	5,653,382	5,721,130
Net defined benefit liabilities	23	1,493,987	1,144,539	1,336,184	1,023,646
Provisions	24,43	148,646	137,761	132,946	123,210
Deferred revenue	25	1,768,565	2,061,461	1,581,759	1,843,718
Financial derivative liabilities	26,39	49,899	69,067	44,628	61,771
Deferred tax liabilities	36	35,257	38,314	31,533	34,267
Other non-current liabilities	27	90,309	84,310	80,770	75,406
Total non-current liabilities		15,026,007	14,259,448	13,438,876	12,753,284
Total liabilities		₩ 22,547,870	₩ 20,897,571	$ 20,166,237	$ 18,690,251
SHAREHOLDERS' EQUITY:					
Capital stock	1,28	479,777	479,777	429,100	429,100
Other capital surplus	29	1,720,150	1,902,214	1,538,458	1,701,292
Other capital components	15,31	627,033	670,772	560,802	599,921
Retained earnings	30	81,761	576,675	73,125	515,763
NON-CONTROLLING INTERESTS:		123,062	121,665	110,063	108,815
Total shareholders' equity		3,031,783	3,751,103	2,711,548	3,354,891
Total liabilities and shareholders' equity		₩ 25,579,653	₩ 24,648,674	$ 22,877,785	$ 22,045,142

(Concluded)

See accompanying notes.

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	NOTES	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
		(In millions, except for earnings (loss) per share)		(In thousands, except for earnings (loss) per share)	
SALES	4,32,40,44	₩ 13,020,276	₩ 12,092,211	$ 11,645,001	$ 10,814,964
COST OF SALES	37	11,003,537	9,991,152	9,841,281	8,935,831
GROSS PROFIT		2,016,739	2,101,059	1,803,720	1,879,133
Selling and administrative expenses	33,37	1,376,449	1,161,277	1,231,061	1,038,616
OPERATING INCOME		640,290	939,782	572,659	840,517
Financial income	34	125,806	72,872	112,517	65,175
Financial expenses	34	580,480	530,662	519,166	474,610
Gain on equity method valuation	13	520	11,319	465	10,123
Other non-operating income	35	335,050	1,493,129	299,660	1,335,417
Other non-operating expenses	35	729,869	864,742	652,776	773,403
INCOME (LOSS) BEFORE INCOME TAX EXPENSES (BENEFIT)	36	(208,683)	1,121,698	(186,641)	1,003,219
INCOME TAX EXPENSES (BENEFIT)		(23,032)	319,801	(20,599)	286,023
NET INCOME (LOSS)		₩ (185,651)	₩ 801,897	$ (166,042)	$ 717,196
OTHER COMPREHENSIVE INCOME (LOSS) AFTER INCOME TAX:					
Items not to be reclassified subsequently to income or loss:					
Remeasurement of net defined benefit liabilities	23	₩ (222,280)	₩ 9,426	$ (198,802)	$ 8,431
Gain (loss) on valuation of financial assets at FVTOCI, net		(26,388)	-	(23,601)	-
Revaluation surplus	15	(8,500)	353,660	(7,601)	316,304
		(257,168)	363,086	(230,004)	324,735

(Continued)

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	NOTES	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
		(In millions, except for earnings (loss) per share)		(In thousands, except for earnings (loss) per share)	
Items to be reclassified subsequently to income or loss:					
Gain (loss) on AFS financial assets, net	32	₩ -	₩ 29,152	$ -	$ 26,072
Change in capital adjustments – equity method–accounting investments	13	(1,630)	912	(1,458)	816
Gain (loss) on foreign operation translation	31	26,851	(89,319)	24,015	(79,885)
		25,221	(59,255)	22,557	(52,997)
COMPREHENSIVE INCOME (LOSS)		₩ (417,598)	₩ 1,105,728	$ (373,489)	$ 988,934
NET INCOME (LOSS) ATTRIBUTABLE TO:					
Owners of the Company		₩ (193,045)	₩ 791,510	$ (172,654)	$ 707,906
Non-controlling interests		7,394	10,387	6,612	9,290
COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:					
Owners of the Company		(419,619)	1,088,879	(375,298)	973,865
Non-controlling interests		2,021	16,849	1,809	15,069
EARNINGS (LOSS) PER SHARE:	38				
Attributable to common stock		(2,012)	8,639	(2)	8
Attributable to preferred stock		(1,962)	8,689	(2)	8

(Concluded)

See accompanying notes.

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won							
	Owners of the Company							
		Other capital surplus						
	Capital stock	Additional paid-in capital	Others	Other capital components	Retained earnings (deficit)	Subtotal	Non-controlling interests	Total
	(In millions)							
January 1, 2017	₩ 369,753	₩ 602,855	₩ 595,519	₩ 385,436	₩ (192,877)	₩ 1,760,686	₩ 113,664	₩ 1,874,350
Dividends	-	-	-	-	-	-	(629)	(629)
Net income	-	-	-	-	791,510	791,510	10,387	801,897
Other comprehensive income (loss)	-	-	-	285,336	12,033	297,369	6,462	303,831
Increase in paid-in capital	110,024	343,340	-	-	-	453,364	-	453,364
Issuance of hybrid securities	-	-	333,427	-	-	333,427	-	333,427
Dividend from hybrid securities	-	-	-	-	(32,993)	(32,993)	-	(32,993)
Gain from assets contributed	-	-	27,169	-	-	27,169	-	27,169
Change in scope of consolidation	-	-	-	-	-	-	(7,996)	(7,996)
Others	-	-	(96)	-	(998)	(1,094)	(223)	(1,317)
December 31, 2017	₩ 479,777	₩ 946,195	₩ 956,019	₩ 670,772	₩ 576,675	₩ 3,629,438	₩ 121,665	₩ 3,751,103
January 1, 2018	₩ 479,777	₩ 946,195	₩ 956,019	₩ 670,772	₩ 576,675	₩ 3,629,438	₩ 121,665	₩ 3,751,103
Effect of change in accounting policies	-	-	-	(5,726)	(44,728)	(50,454)	4	(50,450)
Restatement after applying changed policies	479,777	946,195	956,019	665,046	531,947	3,578,984	121,669	3,700,653
Dividends	-	-	-	-	(24,044)	(24,044)	(629)	(24,673)
Net loss	-	-	-	-	(193,045)	(193,045)	7,394	(185,651)
Other comprehensive income (loss)	-	-	-	(9,317)	(217,258)	(226,575)	(5,372)	(231,947)
Issuance of hybrid securities	-	-	367,686	-	-	367,686	-	367,686
Repayment of hybrid securities	-	-	(549,750)	-	-	(549,750)	-	(549,750)
Dividend from hybrid securities	-	-	-	-	(44,484)	(44,484)	-	(44,484)
Transfer of revaluation surplus	-	-	-	(28,798)	28,798	-	-	-
Disposal of financial assets at FVTOCI	-	-	-	102	(102)	-	-	-
Acquisition of treasury stock	-	-	-	-	-	-	-	-
Others	-	-	-	-	(51)	(51)	-	(51)
December 31, 2018	₩ 479,777	₩ 946,195	₩ 773,955	₩ 627,033	₩ 81,761	₩ 2,908,721	₩ 123,062	₩ 3,031,783

(Continued)

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Translation into U.S. dollars (Note 2)							
	Owners of the Company							
		Other capital surplus						
	Capital stock	Additional paid-in capital	Others	Other capital components	Retained earnings (deficit)	Subtotal	Non-controlling interests	Total
	(In thousands)							
January 1, 2017	$ 330,697	$ 539,178	$ 532,617	$ 344,724	$ (172,504)	$ 1,574,712	$ 101,659	$ 1,676,371
Dividends	-	-	-	-	-	-	(562)	(562)
Net income	-	-	-	-	707,906	707,906	9,290	717,196
Other comprehensive income (loss)	-	-	-	255,197	10,762	265,959	5,780	271,739
Increase in paid-in capital	98,403	307,075	-	-	-	405,478	-	405,478
Issuance of hybrid securities	-	-	298,209	-	-	298,209	-	298,209
Dividend from hybrid securities	-	-	-	-	(29,508)	(29,508)	-	(29,508)
Gain from assets contributed	-	-	24,300	-	-	24,300	-	24,300
Change in scope of consolidation	-	-	-	-	-	-	(7,152)	(7,152)
Others	-	-	(87)	-	(893)	(980)	(200)	(1,180)
December 31, 2017	$ 429,100	$ 846,253	$ 855,039	$ 599,921	$ 515,763	$ 3,246,076	$ 108,815	$ 3,354,891
January 1, 2018	$ 429,100	$ 846,253	$ 855,039	$ 599,921	$ 515,763	$ 3,246,076	$ 108,815	$ 3,354,891
Effect of change in accounting policies	-	-	-	(5,121)	(40,003)	(45,124)	4	(45,120)
Restatement after applying changed policies	429,100	846,253	855,039	594,800	475,760	3,200,952	108,819	3,309,771
Dividends	-	-	-	-	(21,505)	(21,505)	(562)	(22,067)
Net loss	-	-	-	-	(172,654)	(172,654)	6,612	(166,042)
Other comprehensive income (loss)	-	-	-	(8,333)	(194,310)	(202,643)	(4,806)	(207,449)
Issuance of hybrid securities	-	-	328,848	-	-	328,848	-	328,848
Repayment of hybrid securities	-	-	(491,682)	-	-	(491,682)	-	(491,682)
Dividend from hybrid securities	-	-	-	-	(39,785)	(39,785)	-	(39,785)
Transfer of revaluation surplus	-	-	-	(25,756)	25,756	-	-	-
Disposal of financial assets at FVTOCI	-	-	-	91	(91)	-	-	-
Acquisition of treasury stock	-	-	-	-	-	-	-	-
Others	-	-	-	-	(46)	(46)	-	(46)
December 31, 2018	$ 429,100	$ 846,253	$ 692,205	$ 560,802	$ 73,125	$ 2,601,485	$ 110,063	$ 2,711,548

(Concluded)

See accompanying notes.

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
CASH FLOWS FROM OPERATING ACTIVITIES:				
Cash flows from operations:				
Net income (loss)	₩ (185,651)	₩ 801,897	$ (166,042)	$ 717,196
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Loss on valuation of inventories	72,708	-	65,029	-
Provision for leased aircraft maintenance	53,310	45,773	47,679	40,938
Retirement benefit costs	160,689	156,860	143,716	140,291
Depreciation	1,712,294	1,647,830	1,531,432	1,473,777
Amortization	29,383	45,185	26,279	40,412
Bad debt expenses	-	678	-	607
Interest expense	546,353	457,334	488,644	409,028
Loss on valuation of derivatives	23,614	57,498	21,120	51,425
Loss on foreign currency translation	356,308	185,794	318,673	166,169
Loss on foreign currency transaction	78,738	5,391	70,422	4,822
Other bad debt expenses	347	113	310	101
Loss on disposal of property, aircraft and equipment	10,439	263,477	9,337	235,647
Impairment loss on property, aircraft and equipment	20,278	69,502	18,137	62,161
Impairment loss on investment properties	403	-	360	-
Impairment loss on intangible assets	-	103	-	92
Loss on disposal of assets held for sale	-	270	-	241
Revaluation loss on property, aircraft and equipment	-	18,612	-	16,646
Loss on disposal of AFS financial assets	-	639	-	572
Impairment loss on AFS financial assets	-	715	-	639
Impairment loss on investments in associates	-	25,009	-	22,367
Loss on disposal of investment in subsidiaries	-	965	-	863
Income tax expense	-	319,802	-	286,023
Other expenses	16,810	16,035	15,034	14,340
Interest income	(41,386)	(30,831)	(37,015)	(27,575)
Dividend income	(3,888)	(4,587)	(3,477)	(4,103)
Gain on valuation of derivatives	(32,378)	(126)	(28,958)	(112)
Gain on valuation of equity method	(520)	(11,319)	(465)	(10,123)
Gain on foreign currency translation	(93,129)	(991,880)	(83,292)	(887,112)
Reversal of allowance for doubtful accounts	(6,287)	-	(5,623)	-
Reversal of allowance for other doubtful accounts	(769)	(331)	(688)	(296)
Gain on disposal of AFS financial assets	-	(4,503)	-	(4,027)
Gain on disposal of property, aircraft and equipment	(10,729)	(36,291)	(9,596)	(32,458)
Gain on disposal of assets held for sale	(41,694)	(56)	(37,290)	(50)
Gain on disposal of intangible assets	(184)	(1,397)	(164)	(1,250)
Reversal of revaluation loss on property, aircraft and equipment	-	(3,077)	-	(2,752)
Gain on foreign currency transaction	-	(209,334)	-	(187,223)
Income tax benefit	(23,032)	-	(20,599)	-
Other income	(78)	(6,232)	(70)	(5,574)
	2,827,600	2,017,621	2,528,935	1,804,506

(Continued)

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Changes in assets and liabilities resulting from operations:				
Increase in trade receivables	₩ (120,546)	₩ (10,771)	$ (107,813)	$ (9,634)
Increase in other receivables	(18,959)	-	(16,956)	-
Decrease in non-trade receivables	-	6,124	-	5,477
Increase in accrued revenues	-	(7,077)	-	(6,330)
Decrease (increase) in amount due from customers for contract work	8,440	(14,835)	7,548	(13,268)
Increase in inventories	(190,872)	(116,003)	(170,711)	(103,750)
Decrease in financial derivative assets	163	10	146	9
Decrease in advance payments	233,485	19,517	208,823	17,456
Decrease (increase) in prepaid expenses	11,730	(16,456)	10,491	(14,718)
Increase in trade payables	4,216	40,230	3,771	35,981
Increase (decrease) in non-trade payables	1,928	(49,756)	1,725	(44,501)
Increase in accrued expenses	41,666	200,120	37,265	178,983
Increase (decrease) in advances	165,213	(40,331)	147,762	(36,071)
Decrease in unearned revenues	(53,039)	(31,911)	(47,437)	(28,540)
Increase in amount due to customers for contract work	54,155	14,998	48,435	13,414
Decrease in financial derivative liabilities	(19,221)	(26,601)	(17,191)	(23,791)
Decrease in plan assets	9,131	6,236	8,166	5,578
Payment of severance benefit	(125,132)	(135,653)	(111,915)	(121,325)
Succession of defined benefit obligation	1,281	107	1,145	96
Decrease in provisions	(10,539)	(87,864)	(9,426)	(78,583)
Increase in deferred revenue	89,415	193,173	79,971	172,769
Others	58,570	15,599	52,384	13,950
	141,085	(41,144)	126,183	(36,798)
Interest received	43,195	29,227	38,632	26,140
Dividend received	3,888	4,529	3,477	4,050
Income taxes paid	(37,485)	(5,379)	(33,525)	(4,811)
Net cash provided by operating activities	2,792,632	2,806,751	2,497,660	2,510,283

(Continued)

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
CASH FLOWS FROM INVESTING ACTIVITIES:				
Net increase (decrease) in short-term financial instruments	₩ 346,076	₩ (402,341)	$ 309,522	$ (359,844)
Recovery of finance lease receivables	34,113	33,960	30,510	30,373
Disposal of current portion of held-to-maturity investments	-	93	-	83
Disposal of current portion of financial assets at amortized cost	694	-	621	-
Net increase (decrease) in long-term financial instruments	1,943	99,262	1,738	88,778
Purchase of AFS financial assets	-	(2,100)	-	(1,878)
Disposal of AFS financial assets	-	7,876	-	7,044
Purchase of financial assets at FVTPL	(1,400)	-	(1,252)	-
Disposal of financial assets at FVTOCI	213	-	191	-
Purchase of financial assets at FVTOCI	-	-	-	-
Purchase of held-to-maturity investments	-	(25)	-	(22)
Disposal of financial assets at amortized cost	7	-	6	-
Purchase of financial assets at amortized cost	-	-	-	-
Disposal of investment in subsidiaries	-	-	-	-
Net increase (decrease) in short-term loans	-	9	-	8
Net increase (decrease) in long-term loans	9	(1)	8	(1)
Disposal of property, aircraft, equipment and investment properties	78,009	81,754	69,769	73,119
Acquisition of property, aircraft, equipment and investment property	(1,276,204)	(1,876,529)	(1,141,404)	(1,678,319)
Disposal of assets held for sale	203,066	34,106	181,617	30,504
Disposal of intangible assets	930	1,461	832	1,307
Acquisition of intangible assets	(268)	(759)	(240)	(679)
Decrease in guarantee deposits	72,600	221,374	64,932	197,991
Increase in guarantee deposits	(117,726)	(271,284)	(105,291)	(242,630)
Net cash inflows from purchase of subsidiaries	-	38,649	-	34,567
Net cash outflows from change in scope of consolidation	-	(6,752)	-	(6,038)
Disposal of other non-current assets	1	-	1	-
Net cash used in investing activities	(657,937)	(2,041,247)	(588,440)	(1,825,637)

(Continued)

KOREAN AIR LINES CO., LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
CASH FLOWS FROM FINANCING ACTIVITIES:				
Net increase (decrease) in short-term borrowings	₩ (124,725)	₩ (310,828)	$ (111,551)	$ (277,997)
Proceeds from short-term debentures	-	70,000	-	62,606
Repayment of short-term debentures	(70,000)	(331,877)	(62,606)	(296,823)
Repayment of current portion of long-term borrowings	(2,084,364)	(2,295,624)	(1,864,202)	(2,053,147)
Repayment of current portion of finance lease obligations	(1,264,366)	(1,712,002)	(1,130,817)	(1,531,171)
Repayment from long-term borrowings	-	(4,439)	-	(3,970)
Proceeds from long-term borrowings	1,019,177	1,540,027	911,526	1,377,361
Proceeds from debentures	1,161,185	683,328	1,038,534	611,151
Proceeds from ABS loans	749,700	504,665	670,512	451,359
Defeasance of finance lease obligations	-	529,170	-	473,276
Paid-in capital increase	-	453,269	-	405,392
Repayment of guaranteed loans	-	(3,810)	-	(3,407)
Dividends paid	(24,673)	(629)	(22,067)	(562)
Issuance of hybrid securities	367,685	333,427	328,848	298,209
Repayment of hybrid securities	(549,750)	-	(491,682)	-
Dividends from hybrid securities paid	(43,434)	(32,993)	(38,846)	(29,508)
Interest paid	(543,951)	(457,860)	(486,497)	(409,498)
Other cash flows from financing activities	-	(13)	-	(12)
Net cash used in financing activities	(1,407,516)	(1,036,189)	(1,258,848)	(926,741)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	727,179	(270,685)	650,372	(242,095)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	761,235	1,089,927	680,829	974,803
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	15,537	(58,007)	13,895	(51,879)
CASH AND CASH EQUIVALENTS AT END OF YEAR	₩ 1,503,951	₩ 761,235	$ 1,345,096	$ 680,829

(Concluded)

See accompanying notes.

1. GENERAL:

Korean Air Lines Co., Ltd. (the "Company") was established on June 19, 1962, and is engaged in the business of domestic and international airline services, manufacture of aircraft parts, maintenance of aircraft and catering of in-flight meals. The Company has been a publicly traded company upon listing its common stock on the Korea Exchange since 1966 and its headquarters is located at Haneul-gil, Gangseo-gu, Seoul, Korea.

Total capital stock of the Company as of December 31, 2018, amounted to ₩479,777 million ($429,100 thousand) in par value (including ₩5,554 million ($4,967 thousand) of preferred stock). The principal shareholders of the Company's common shares are Hanjin Kal Co., Ltd. (29.96%) and its affiliates (3.39%).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis of Financial Statement Presentation

The Company and its subsidiaries (the "Group") maintain its official accounting records in Korean won and prepare the consolidated financial statements in conformity with Korean statutory requirements and Korean International Financial Reporting Standards ("K-IFRSs"), in Korean language (Hangul). Accordingly, these consolidated financial statements are intended for use by those who are informed about K-IFRSs and Korean practices. Certain information included in the Korean language financial statements, but not required for a fair presentation of the Group's financial position, operating results, changes in shareholders' equity or cash flows is not presented in the accompanying consolidated financial statements.

The accompanying consolidated financial statements are stated in Korean won, the currency of the country in which the Group is incorporated and operates. The translation of Korean won amounts into U.S. dollar amounts is included solely for the convenience of readers outside of the Republic of Korea and has been made at the rate of ₩1,118.10 to USD 1.00 on December 31, 2018, the base rate announced by Seoul Money Brokerage Services, Ltd. Such translations should not be interpreted as representations that the Korean won amounts could be converted into U.S. dollars at that or any other rate.

(1) Basis of preparation

The Group has prepared the consolidated financial statements in accordance with the K-IFRSs.

The Group's accounting policies applied for the accompanying consolidated financial statements are the same as the policies applied for the preparation of consolidated financial statements as of and for the year ended December 31, 2017, except for the effects from the introduction of new and revised accounting standards of interpretation as described below.

The accompanying consolidated financial statements have been prepared on the historical cost basis, except for certain non-current assets and financial instruments that are measured at revalued amounts or fair values, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of K-IFRS 1102 *'Share-based payment'*; leasing transactions that are within the scope of K-IFRS 1017 *'Leases';* and measurements that have some similarities to fair value but are not fair value, such as net realizable value in K-IFRS 1002 *'Inventories'* or value in use in K-IFRS 1036 *'Impairment of Assets.'*

1) Accounting standards and interpretations that were newly applied for the year ended December 31, 2018, and changes in the Group's accounting policies are as follows:

<u>Enactment to K-IFRS 1109 – *Financial Instruments*</u>

The Group applied the amendments to K-IFRS 1109 and other standards for the initial application from January 1, 2018. K-IFRS 1109 applies new policies for: 1) classification and measurement of financial assets and financial liabilities, 2) impairment of financial assets and 3) hedge accounting. Additionally, the Group adopted consequential amendments to K-IFRS 1107 *'Financial Instruments: Disclosures'* that were applied to the disclosures for 2018. K-IFRS 1109 provides transitional provisions that do not restated the prior period when the Group first adopts it, and accordingly the Group did not restated comparative financial statements.

Details of these new requirements as well as their impact on the Group's consolidated financial statements are described below.

A. Classification and measurement of financial assets

All recognized financial assets that are within the scope of K-IFRS 1109 are required to be measured subsequently at amortized cost or fair value on the basis of the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets.

- Debt instruments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at amortized cost;

- Debt instruments that are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at fair value through other comprehensive income ("FVTOCI");

- All other debt investments and equity investments are measured subsequently at fair value through profit or loss ("FVTPL").

Despite the foregoing, the Group may make the following irrevocable election/designation at initial recognition of a financial asset:

- The Group may irrevocably elect to present subsequent changes in fair value of an equity investment that is neither held for trading nor a contingent consideration recognized by an acquirer in a business combination in other comprehensive income; and
- The Group may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

In the current year, the Group has not designated any debt investments that meet the amortized cost or FVTOCI criteria as measured at FVTPL.

When a debt investment measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment. When an equity investment designated as measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is subsequently transferred to retained earnings.

Debt instruments that are measured subsequently at amortized cost or at FVTOCI are subject to impairment. See 2 (1) 1) B. below.

The directors of the Group reviewed and assessed the Group's existing financial assets as of January 1, 2018, based on the facts and circumstances that existed at that date and concluded that the initial application of K-IFRS 1109 has had the following impact on the Group's financial assets with regard to their classification and measurement:

- The Group's investments in redeemable notes were classified as available-for-sale financial assets under K-IFRS 1039 *'Financial Instruments: Recognition and Measurement.'* The notes have been reclassified as financial assets at amortized cost because they are held within a business model whose objective is to collect the contractual cash flows and they have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding;

- The Group's investment in corporate bonds that were classified as available-for-sale financial assets under K-IFRS 1039 have been classified as financial assets at FVTOCI because they are held within a business model whose objective is both to collect contractual cash flows and to sell the bonds, and they have contractual cash flows that are solely payments of principal and interest on principal outstanding. The change in the fair value on these redeemable notes continues to accumulate in the investment revaluation reserve until they are derecognized or reclassified;

- The Group's investments in equity instruments (neither held for trading nor a contingent consideration arising from a business combination) that were previously classified as available-for-sale financial assets and were measured at fair value at each reporting date under K-IFRS 1109 have been designated as at FVTOCI. The change in fair value on these equity instruments continues to be accumulated in the investment revaluation reserve;

- There is no change in the measurement of the Group's investments in equity instruments that are held for trading; those instruments were, and continue to be, measured at FVTPL;
- Financial assets classified as held-to-maturity and loans and receivables under K-IFRS 1039 that were measured at amortized cost continue to be measured at amortized cost under K-IFRS 1109 as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

Changes in the classification of financial assets under K-IFRS 1109 are described in Note 2 (1) 1) E. Gain on valuation of AFS financial assets of ₩68,440 million ($61,211 thousand) recognized as other comprehensive income and subsequently reclassified to profit or loss as a result of changes in the classification of debt securities and equity securities at the date of initial application is recognized in equity securities that are not subsequently reclassified to profit or loss. Therefore, the gain on valuation of the financial assets is fully replaced by valuation of equity securities designated as FVTOCI.

None of the other reclassifications of financial assets have had any impact on the Group's financial position, profit or loss, other comprehensive income or total comprehensive income in the current year.

B. Impairment of financial assets

In relation to the impairment of financial assets, K-IFRS 1109 requires an expected credit loss ("ECL") model as opposed to an incurred credit loss model under K-IFRS 1039. The ECL model requires the Group to account for ECL and changes in those ECL at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. In other words, it is no longer necessary for a credit event to have occurred before credit losses are recognized.

Specifically, K-IFRS 1109 requires the Group to recognize a loss allowance for ECLs on:

i) Debt investments measured subsequently at amortized cost or at FVTOCI,
ii) Lease receivables,
iii) Trade receivables and contract assets, and
iv) Financial guarantee contracts to which the impairment requirements of K-IFRS 1109 apply.

In particular, K-IFRS 1109 requires the Group to measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses ("ECL") if the credit risk on that financial instrument has increased significantly since initial recognition, or if the financial instrument is a purchased or originated credit-impaired financial asset. However, if the credit risk on a financial instrument has not increased significantly since initial recognition (except for a purchased or originated credit-impaired financial asset), the Group is required to measure the loss allowance for that financial instrument at an amount equal to 12-month ECL. K-IFRS 1109 also requires a simplified approach for measuring the loss allowance at an amount equal to lifetime ECL for trade receivables, contract assets and lease receivables in certain circumstances. Among them, the Group applies the simplified approach for trade receivables and contract assets.

The Group has assessed whether there has been a significant increase in credit risk since initial recognition of financial instruments that remain recognized on the date of initial application of K-IFRS 1109 (i.e., January 1, 2018); the directors have assessed the credit risk of the respective financial instruments on the date of their initial recognition. As of January 1, 2018, there is no additional loss allowance recognized as a result of applying the impairment provisions of K-IFRS 1109.

The difference between provisions for doubtful accounts under K-IFRS 1039 and guarantees under K-IFRS 1037 as of January 1, 2018, and loss allowance under K-IFRS 1109 is as follows: They are disclosed in each footnote.

In accordance with amendments to K-IFRS 1107, the disclosure requirements for the total exposure of credit risk on the Group's consolidated financial statements have increased.

C. Classification and measurement of financial liabilities

A significant change introduced by K-IFRS 1109 in the classification and measurement of financial liabilities relates to the accounting for changes in the fair value of a financial liability designated as at FVTPL attributable to changes in the credit risk of the issuer.

Specifically, K-IFRS 1109 requires that the changes in the fair value of the financial liability that is attributable to changes in the credit risk of that liability be presented in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. Changes in fair value attributable to a financial liability's credit risk are not subsequently reclassified to profit or loss, but are instead transferred to retained earnings when the financial liability is derecognized. Previously, under K-IFRS 1039, the entire amount of the change in the fair value of the financial liability designated as at FVTPL was presented in profit or loss.

The adoption of K-IFRS 1109 has no significant impact on the classification and measurement of financial liabilities.

Note 2 (1) 1) E. describes the specific details of the change in classification according to the application of K-IFRS 1109.

D. General hedge accounting

The new general hedge accounting requirements retain the three types of hedge accounting. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify for hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting. In addition, the effectiveness test has been replaced with the principle of an 'economic relationship'. Retrospective assessment of hedge effectiveness is also no longer required. Enhanced disclosure requirements about the Group's risk management activities have also been introduced.

K-IFRS 1109 has no effect on the Group's financial position and results of operations for the period.

E. Disclosures in relation to the initial application of K-IFRS 1109

There were no financial assets or financial liabilities that the Group had previously designated as at FVTPL under K-IFRS 1039 that were subject to reclassification or that the Group has elected to reclassify upon the application of K-IFRS 1109. There were no financial assets or financial liabilities that the Group has elected to designate as at FVTPL at the date of initial application of K-IFRS 1109.

The classification and measurement of financial assets and financial liabilities in accordance with K-IFRS 1109 and K-IFRS 1039 as of January 1, 2018, the initial application date, are as follows:

	Korean won				
	Category		Book value		
	(In millions)				
Description	K-IFRS 1039	K-IFRS 1109	K-IFRS 1039	Additional loss allowance under K-IFRS 1109	K-IFRS 1109
Listed securities	AFS financial assets	Financial assets at FVTOCI	₩ 127,854	₩ -	₩ 127,854
Unlisted securities	AFS financial assets	Financial assets at FVTOCI	54,965	-	54,965
Investments in other equity securities, etc.	AFS financial assets	Financial assets at FVTPL	19,351	974	20,325
Financial derivative assets	Financial assets at FVTPL	Financial assets at FVTPL	126	-	126
Financial derivative liabilities	Financial liabilities at FVTPL	Financial liabilities at FVTPL	69,108	-	69,108
Government and public bonds, etc.	Held-to-maturity investment	Financial assets at amortized cost	1,037	-	1,037
Guarantee deposits, etc.	Loans and receivables	Financial assets at amortized cost	262,366	-	262,366
Trade and other receivables	Loans and receivables	Financial assets at amortized cost	757,063	-	757,063
Short-term and long-term financial instruments	Loans and receivables	Financial assets at amortized cost	516,127	-	516,127
Finance lease receivables	Loans and receivables	Financial assets at amortized cost	157,030	-	157,030
Finance lease obligations	Financial liabilities at amortized cost	Financial liabilities at amortized cost	7,575,128	-	7,575,128
Trade and other payables	Financial liabilities at amortized cost	Financial liabilities at amortized cost	923,220	-	923,220
Borrowings and debentures	Financial liabilities at amortized cost	Financial liabilities at amortized cost	7,270,214	-	7,270,214

	Translation into U.S. dollars (Note 2)				
	Category		Book value		
			(In thousands)		
Description	K-IFRS 1039	K-IFRS 1109	K-IFRS 1039	Additional loss allowance under K-IFRS 1109	K-IFRS 1109
Listed securities	AFS financial assets	Financial assets at FVTOCI	$ 114,349	$ -	$ 114,349
Unlisted securities	AFS financial assets	Financial assets at FVTOCI	49,159	-	49,159
Investments in other equity securities, etc.	AFS financial assets	Financial assets at FVTPL	17,307	871	18,178
Financial derivative assets	Financial assets at FVTPL	Financial assets at FVTPL	112	-	112
Financial derivative liabilities	Financial liabilities at FVTPL	Financial liabilities at FVTPL	61,809	-	61,809
Government and public bonds, etc.	Held-to-maturity investment	Financial assets at amortized cost	928		928
Guarantee deposits, etc.	Loans and receivables	Financial assets at amortized cost	234,654	-	234,654
Trade and other receivables	Loans and receivables	Financial assets at amortized cost	677,098	-	677,098
Short-term and long-term financial instruments	Loans and receivables	Financial assets at amortized cost	461,611	-	461,611
Finance lease receivables	Loans and receivables	Financial assets at amortized cost	140,444	-	140,444
Finance lease obligations	Financial liabilities at amortized cost	Financial liabilities at amortized cost	6,775,000	-	6,775,000
Trade and other payables	Financial liabilities at amortized cost	Financial liabilities at amortized cost	825,704	-	825,704
Borrowings and debentures	Financial liabilities at amortized cost	Financial liabilities at amortized cost	6,502,293	-	6,502,293

There is no additional loss allowance on the initial application of K-IFRS 1109 and no financial assets or financial liabilities that the Group elected to reclassify as it applies K-IFRS 1109. There are no financial assets or financial liabilities designated at FVTPL at the date of initial application of K-IFRS 1109.

Enactment to K-IFRS 1115 – *Revenue from Contracts with Customers*

In the current year, the Group has applied K-IFRS 1115 '*Revenue from Contracts with Customers*', which is effective for an annual period that begins on or after January 1, 2018. K-IFRS 1115 introduced a five-step approach to revenue recognition. Far more prescriptive guidance has been added in K-IFRS 1115 to deal with specific scenarios. Details of the new requirements as well as their impact on the Group's consolidated financial statements are described below.

The table below shows information relating to financial assets and financial liabilities that have been reclassified as a result of transition to K-IFRS 1109 and K-IFRS 1039:

The Group has applied K-IFRS 1115 in accordance with the fully retrospective transitional approach using the expedient in K-IFRS 1115 allowing both non-disclosure of the amount of the transaction price allocated to the remaining performance obligations and an explanation of when it expects to recognize that amount as revenue for all reporting periods presented before the date of initial application, i.e., January 1, 2018.

Amendments to K-IFRS 1102 – *Share-Based Payment*

The amendments include: 1) when measuring the fair value of share-based payment, the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payment should be consistent with the measurement of equity-settled share-based payment, 2) Share-based payment transaction in which the Group settles the share-based payment arrangement net by withholding a specified portion of the equity instruments per statutory tax withholding requirements would be classified as equity-settled in its entirety (it otherwise would be classified as equity-settled without the net settlement feature); and 3) when a cash-settled share-based payment changes to an equity-settled share-based payment because of modifications of the terms and conditions, the original liability recognized is derecognized and the equity-settled share-based payment is recognized at the modification date fair value. Any difference between the carrying amount of the liability at the modification date and the amount recognized in equity at the same date would be recognized in profit and loss immediately. The application of K-IFRS 1102 has not had a significant impact on the financial position and/or financial performance of the Group.

Amendments to K-IFRS 1040 – *Transfers of Investment Property*

The amendments clarify that a transfer to, or from, investment property necessitates an assessment of whether a property meets, or has ceased to meet, the definition of investment property, supported by observable evidence that a change in use has occurred. The amendments further clarify that situations other than the ones listed in K-IFRS 1040 may evidence a change in use, and that a change in use is possible for properties under construction (i.e., a change in use is not limited to completed properties). The application of K-IFRS 1040 has not had a significant impact on the financial position and/or financial performance of the Group.

Annual Improvements to K-IFRS 2014-2016 Cycle

The Annual Improvements include amendments to K-IFRS 1101 First-time Adoption and K-IFRS 1028 *'Investment in Associates and Joint Ventures'*. The amendments to K-IFRS 1028 clarify that the option for a venture capital organization and other similar entities to measure investments in associates and joint ventures at FVTPL is available separately for each associate or joint venture, and that election should be made at initial recognition of the associate or joint venture. In respect of the option for an entity that is not an investment entity(IE) to retain the fair value measurement applied by its associates and joint ventures that are IEs when applying the equity method, the amendments make a similar clarification that this choice is available for each IE associate or IE joint venture.

The Group does not anticipate that the application of the amendments in the future will have any impact on the Group's consolidated financial statements as the Group is neither a first-time adopter of K-IFRS nor a venture capital organization. Furthermore, the Group does not have any associate or joint venture that is an IE.

Enactment to K-IFRS 2122 – *Foreign Currency Transactions and Advance Consideration*

The interpretation addresses how to determine the 'date of transaction' for the purpose of determining the exchange rate to use on initial recognition of an asset, expense or income, when consideration for that item has been paid or received in advance in a foreign currency which resulted in the recognition of a non-monetary asset or non-monetary liability (e.g., a non-refundable deposit or deferred revenue).

The interpretation specifies that the date of transaction is the date on which the entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. If there are multiple payments or receipts in advance, the interpretation requires an entity to determine the date of transaction for each payment or receipt of advance consideration.

The Group does not anticipate that the application of the enactment in the future will have an impact on its consolidated financial statements because it already accounts for transactions involving the payment or receipt of advance consideration in a foreign currency in a way that is consistent with the enactment.

The effect of changes in accounting policies on the consolidated financial statements for the year ended December 31, 2018, is as follows:

	Korean won					
	January 1, 2018					
Description	Before application		Adjustment		After application	
			(In millions)			
Current assets	₩	3,582,302	₩	(31,292)	₩	3,551,010
Non-current assets		21,066,372		19,064		21,085,436
Total assets		24,648,674		(12,228)		24,636,446
Current liabilities		6,638,123		(1,863)		6,636,260
Non-current liabilities		14,259,448		40,085		14,299,533
Total liabilities		20,897,571		38,222		20,935,793
Total shareholders' equity	₩	3,751,103	₩	(50,450)	₩	3,700,653

	Translation into U.S. dollars (Note 2)					
	January 1, 2018					
Description	Before application		Adjustment		After application	
			(In thousands)			
Current assets	$	3,203,920	$	(27,988)	$	3,175,932
Non-current assets		18,841,222		17,052		18,858,274
Total assets		22,045,142		(10,936)		22,034,206
Current liabilities		5,936,967		(1,667)		5,935,300
Non-current liabilities		12,753,284		35,851		12,789,135
Total liabilities		18,690,251		34,184		18,724,435
Total shareholders' equity	$	3,354,891	$	(45,120)	$	3,309,771

The effect of changes in accounting policy on each item of equity as of the initial application date is as follows:

	Korean won			
	Owners of the Company			
Description	Other capital components	Retained earnings	Non-controlling interests	Total
		(In millions)		
December 31, 2017 (reporting amount)	₩ 670,772	₩ 576,675	₩ 121,665	₩ 1,369,112
Initial application of K-IFRS 1109:				
Effects of classification and measurement	(7,573)	8,541	5	973
Effect of impairment	-	-	-	-
Effect of income tax	1,847	(2,060)	(1)	(214)
Total effects of K-IFRS 1109	(5,726)	6,481	4	759
Initial application of K-IFRS 1115:				
Effect of performance obligations satisfied over time	-	(31,247)	-	(31,247)
Effect of allocation of the transaction price	-	(38,222)	-	(38,222)
Progress measurement using input methods	-	(45)	-	(45)
Effect of income tax		18,305	-	18,305
Total effects of K-IFRS 1115	-	(51,209)	-	(51,209)
January 1, 2018 (date of initial application)	₩ 665,046	₩ 531,947	₩ 121,669	₩ 1,318,662

Description	Translation into U.S. dollars (Note 2) — Owners of the Company — Other capital components	Retained earnings	Non-controlling interests	Total
	(In thousands)			
December 31, 2017 (reporting amount)	$ 599,921	$ 515,763	$ 108,815	$ 1,224,499
Initial application of K-IFRS 1109:				
Effects of classification and measurement	(6,773)	7,639	5	871
Effect of impairment	-	-	-	-
Effect of income tax	1,652	(1,842)	(1)	(191)
Total effects of K-IFRS 1109	(5,121)	5,797	4	680
Initial application of K-IFRS 1115:				
Effect of performance obligations satisfied over time	-	(27,946)	-	(27,946)
Effect of allocation of the transaction price	-	(34,184)	-	(34,184)
Progress measurement using input methods	-	(41)	-	(41)
Effect of income tax	-	16,371	-	16,371
Total effects of K-IFRS 1115	-	(45,800)	-	(45,800)
January 1, 2018 (date of initial application)	$ 594,800	$ 475,760	$ 108,819	$ 1,179,379

2) The Group has not applied or adopted earlier the following new and revised K-IFRS that have been issued, but are not yet effective:

Enactment to K-IFRS 1116— *Leases*

A. General impact of application of K-IFRS 1116 Leases

K-IFRS 1116 provides a comprehensive model for the identification of lease arrangements and their treatments in the financial statements for both lessors and lessees. K-IFRS 1116 will supersede the current lease guidance, including K-IFRS 1017 *'Leases'* and the related interpretations when it becomes effective for accounting periods beginning on or after January 1, 2019. The date of initial application of K-IFRS 1116 for the Group will be January 1, 2019.

The lessee has an option to choose between the full retrospective application for each reporting date and modified retrospective application at the initial application date.

The Group plans to apply modified retrospective approach as of January 1, 2019, in accordance with K-IFRS 1116. Therefore, the cumulative effect of applying K-IFRS 1116 will be adjusted in the retained earnings (or, where appropriate, other components of equity) at the date of initial application, and the comparative financial statements will not be restated.

The lessee and lessor must account for each lease element of the lease, separate from the non-lease element in a lease contract. The lessee is required to recognize lease assets and liabilities that represents the right to use the underlying assets and the obligation to pay the lease payments. However, in case of short-term lease and small-value-based lease, the exemption provisions of the standard may be selected. In addition, the lessee is not required to separate the lease component from the non-lease component in accordance with the simplified approach, and can account for each lease component and related non-lease component as one lease component.

In contrast to lessee accounting, K-IFRS 1116 substantially carries forward the lessor accounting requirements in K-IFRS 1017.

B. Impact of the new definition of a lease

The Group will make use of the practical expedient available on transition to K-IFRS 1116 not to reassess whether a contract is or contains, a lease. Accordingly, the definition of a lease in accordance with K-IFRS 1117 will continue to apply to those leases entered or modified before January 1, 2019.

The Group will apply the definition of a lease and related guidance set out in K-IFRS 1116 to all lease contracts entered into or modified on or after January 1, 2019 (whether it is a lessor or a lessee in the lease contract). In preparation for the first-time application of K-IFRS 1116, the Group has carried out an implementation project.

The change in definition of a lease mainly relates to the concept of control. K-IFRS 1116 distinguishes between leases and service contracts on the basis of whether the use of an identified asset is controlled by the customer. Control is considered to exist if the customer has:

- The right to obtain substantially all of the economic benefits from the use of an identified asset; and
- The right to direct the use of that asset.

C. Impact on Lessee Accounting

a) Operating leases

K-IFRS 1116 will change how the Group accounts for leases previously classified as operating leases under K-IFRS 1017, which were off-consolidated statement of financial position. On initial application of K-IFRS 1116, for all leases (except as noted below), the Group will:

- Recognize right-of-use assets and lease liabilities in the consolidated statement of financial position, initially measured at the present value of the future lease payments;

- Recognize depreciation of right-of-use assets and interest on lease liabilities in the consolidated statement of profit or loss; and

- Separate the total amount of cash paid into a principal portion (presented within financing activities) and interest (presented within operating activities) in the consolidated statement of cash flows.

Under K-IFRS 1116, right-of-use assets will be tested for impairment in accordance with K-IFRS 1036 Impairment of Assets. This will replace the previous requirement to recognize a provision for onerous lease contracts.

For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as personal computers and office furniture), the Group will opt to recognize a lease expense on a straight-line basis as permitted by K-IFRS 1116.

The Group is reviewing the potential impact of applying this standard on the introduction of K-IFRS 1116.

b) Finance leases

The main difference between K-IFRS 1116 and K-IFRS 1017 with respect to assets formerly held under a finance lease is the measurement of the residual value guarantees provided by the lessee to the lessor. K-IFRS 1116 requires that the Group recognize as part of its lease liability only the amount expected to be payable under a residual value guarantee, rather than the maximum amount guaranteed as required by K-IFRS 1017. On initial application the Group will present equipment previously included in property, aircraft and equipment within the line item for right-of-use assets and the lease liability, previously presented within borrowing, will be presented in a separate line for lease liabilities.

Based on an analysis of the Group's finance leases as of December 31, 2018, on the basis of the facts and circumstances that exist at that date, the directors of the Group have assessed that the impact of this change will not have an impact on the amounts recognized in the Group's consolidated financial statements.

D. Impact on Lessor Accounting

Under K-IFRS 1116, a lessor continues to classify leases as either finance leases or operating leases and account for those two types of leases differently. However, K-IFRS 1116 has changed and expanded the disclosures required, in particular regarding how a lessor manages the risks arising from its residual interest in leased assets.

Under K-IFRS 1116, an intermediate lessor accounts for the head lease and the sublease as two separate contracts. The intermediate lessor is required to classify the sublease as a finance or operating lease by reference to the right-of-use asset arising from the head lease (and not by reference to the underlying asset as was the case under K-IFRS 1017).

Because of this change, the Group will reclassify certain of its sublease agreements as finance leases. As required by K-IFRS 1109, an allowance for ECLs will be recognized on the finance lease receivables. The leased assets will be derecognized and finance lease asset receivables will be recognized. This change in accounting will change the timing of recognition of the related revenue (recognized in finance income).

Amendments to K-IFRS 1109 – *Financial Instruments*

The amendments to K-IFRS 1109 clarify that for the purpose of assessing whether a prepayment feature meets the SPPI condition, the party exercising the option may pay or receive reasonable compensation for the prepayment irrespective of the reason for prepayment. In other words, prepayment features with negative compensation do not automatically fail SPPI. The amendment applies to annual periods beginning on or after January 1, 2019, with earlier application permitted.

Amendments to K-IFRS 1028 – *Long-term Interests in Associates and Joint Ventures*

The amendment clarifies that K-IFRS 1109, including its impairment requirements, applies to long-term interests. Furthermore, in applying K-IFRS 1109 to long-term interests, an entity does not take into account adjustments to its carrying amount required by K-IFRS 1028 (i.e., adjustments to the carrying amount of long-term interests arising from the allocation of losses of the investee or assessment of impairment in accordance with K-IFRS 1028). The amendments apply retrospectively to annual reporting periods beginning on or after January 1, 2019. Earlier application is permitted.

Annual Improvements to K-IFRS 2015-2017 Cycle

The Annual Improvements include amendments to four Standards i.e., K-IFRS 1012 *'Income Taxes'*, K-IFRS 1023 *'Borrowing Costs'*, K-IFRS 1103 *'Business Combinations'*, and K-IFRS 1111 *'Joint Arrangements.'*

A. K-IFRS 1012– *Income Taxes*

The amendments clarify that an entity should recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized the transactions that generated the distributable profits. This is the case irrespective of whether different tax rates apply to distributed and undistributed profits.

B. K-IFRS 1023– *Borrowing Costs*

The amendments clarify that if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the capitalization rate on general borrowings.

C. K-IFRS 1103– *Business Combinations*

The amendments to K-IFRS 1103 clarify that when an entity obtains control of a business that is a joint operation, the entity applies the requirements for a business combination achieved in stages, including remeasuring its previously held interest ("PHI") in the joint operation at fair value. The PHI to be remeasured includes any unrecognized assets, liabilities and goodwill relating to the joint operation.

D. K-IFRS 1111– *Joint Arrangements*

The amendments to K-IFRS 1111 clarify that when a party that participates in, but does not have joint control of, a joint operation that is a business obtains joint control of such a joint operation, the entity does not remeasure its PHI in the joint operation.

All the amendments are effective for annual periods beginning on or after January 1, 2019 and generally require prospective application. Earlier application is permitted.

Amendments to K-IFRS 1019 – *Employee Benefits*
The amendments clarify that the past service cost (or the gain or loss on settlement) is calculated by measuring the defined benefit liability (asset) using updated assumptions and comparing benefits offered and plan assets before and after the plan amendment (or curtailment or settlement), but ignoring the effect of the asset ceiling (that may arise when the defined benefit plan is in a surplus position). K-IFRS 1019 is now clear that the change in the effect of the asset ceiling that may result from the plan amendment (or curtailment or settlement) is determined in a second step and is recognized in the normal manner in other comprehensive income.

The paragraphs that relate to measuring the current service cost and the net interest on the net defined benefit liability (asset) have also been amended. An entity will now be required to use the updated assumptions from this remeasurement to determine current service cost and net interest for the remainder of the reporting period after the change to the plan. In case of the net interest, the amendments make it clear that for the period post plan amendment, the net interest is calculated by multiplying the net defined benefit liability (asset) as remeasured under paragraph 99 with the discount rate used in the remeasurement (also taking into account the effect of contributions and benefit payments on the net defined benefit liability (asset)).

The amendments are applied prospectively. They apply only to plan amendments, curtailments or settlements that occur on or after the beginning of the annual period in which the amendments to K-IFRS 1019 are first applied. The amendments to K-IFRS 1019 must be applied to annual periods beginning on or after January 1, 2019, but they can be applied earlier if an entity elects to do so.

Amendments to K-IFRS 1115 – *Revenue from Contracts with Customers*

This amendment relates to prevent the revision of meaning 'contract' referred in K-IFRS 1115 paragraph 129.1 to 'individual contract' in relation to 'additional disclosure of contracts based on contract costs incurred to date', so that even if application of K-IFRS 1115 is adopted, the range of disclosure has not been reduced. In addition, K-IFRS 1115 does not distinguish the types of contracts that the service contracts that did not qualify for the application of K-IFRS 1011 in paragraph 45.1 can be qualified in K-IFRS 1115 paragraph 129.1 and it is to clarify that the range of the contracts subject to make disclosure in accordance with paragraph 129.1 can be expanded compared to the previous standard. This amendment is effective for annual periods beginning on or after January 1, 2019, and earlier application is permitted.

Enactment to K-IFRS 2123 – *Interpretation Uncertainty over Income Tax Treatments*

K-IFRS 2123 Interpretation sets out how to determine the accounting tax position when there is uncertainty over income tax treatments. The interpretation requires an entity to:

a) Determine whether uncertain tax positions are assessed separately or as a group; and

b) Assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings:

- If yes, the entity should determine its accounting tax position consistently with the tax treatment used or planned to be used, in its income tax filings.

- If no, the entity should reflect the effect of uncertainty in determining its accounting tax position.

The interpretation is effective for annual periods beginning on or after January 1, 2019. Entities can apply the interpretation with either full retrospective application or modified retrospective application without restatement of comparatives retrospectively or prospectively.

The directors of the Group do not anticipate that the application of the amendments in the future will have an impact on the Group’s consolidated financial statements.

The Group is currently reviewing the effect of the amendments to the consolidated financial statements.

(2) Investments in subsidiaries, jointly controlled entities and associates

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates or joint ventures are incorporated in these financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with K-IFRS 1105. Under the equity method, an investment in an associate or a joint venture is recognized initially in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognising its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognized immediately in profit or loss in the period in which the investment is acquired.

The requirements of K-IFRS 1028 are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate or a joint venture. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with K-IFRS 1036 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognized is not allocated to any asset, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with K-IFRS 1036 to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date when the investment ceases to be an associate or a joint venture. When the Group retains an interest in the former associate or a joint venture and the retained interest is a financial asset, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition in accordance with K-IFRS 1109. The difference between the carrying amount of the associate or a joint venture at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate or a joint venture is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate on the same basis as would be required if that associate had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) when the associate or joint venture is disposed of.

When the Group reduces its ownership interest in an associate or a joint venture but the Group continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities.

When a group entity transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

(3) Interests in joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a Group entity undertakes its activities under joint operations, the Group as a joint operator recognizes in relation to its interest in a joint operation:

- Its assets, including its share of any assets held jointly;
- Its liabilities, including its share of any liabilities incurred jointly;
- Its revenue from the sale of its share of the output arising from the joint operation;
- Its share of the revenue from the sale of the output by the joint operation; and
- Its expenses, including its share of any expenses incurred jointly.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the K-IFRS applicable to the particular assets, liabilities, revenues and expenses.

When a Group entity transacts with a joint operation in which a Group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Group's consolidated financial statements only to the extent of other parties' interests in the joint operation.

When a Group entity transacts with a joint operation in which a Group entity is a joint operator (such as a purchase of assets), the Group does not recognize its share of the gains and losses until it resells those assets to a third party.

(4) Non-current assets held for sale

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of the carrying amount or fair value, less costs to sell.

Non-current assets and disposal Groups are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continued use. This condition is regarded as met only when the sale is highly probable and the asset (or disposal group) is available for immediate sale in its present condition. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

When the Group is committed to a sale plan involving loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the Group will retain a non-controlling interest in its former subsidiary after the sale.

When the Group is committed to a sale plan involving disposal of an investment in an associate or, a portion of an investment in an associate, the investment, or the portion of the investment in the associate that will be disposed of, is classified as held for sale when the criteria described above are met, and the Group ceases to apply the equity method in relation to the portion that is classified a held for sale. Any retained portion of an investment in an associate that has not been classified as held for sale continues to be accounted for using the equity method.

(5) Revenue recognition

Revenue is measured based on the consideration set by the contract with the customer, and is recognized by applying the revenue recognition when 1. identifying the contract(s) with a customer, 2. identifying the performance obligations in the contract, 3. determining the transaction price, 4. allocating the transaction price to the performance obligations in the contract and 5. recognizing revenue when (or as) the entity satisfies a performance obligation (or as the obligation is performed over the period of time). It excludes amounts collected on behalf of third parties. The Group recognizes revenue when it transfers control of a product or service to a customer.

1) Sales of goods and Rendering of services

Revenue from the sale of goods is recognized when the Group has transferred to the buyer the significant risks and rewards of ownership of the goods. Variable consideration is included in the transaction price only to the extent it is probable or highly probable that a significant reversal in the cumulative amount of revenue recognized will not occur in future periods.

2) Royalty revenue

Royalty revenue is recognized on an accrual basis that reflects the economic realities of the related contracts.

3) Customer royalty program

The Group operates customer royalty program to provide customers with incentives to buy their goods or services. If a customer buys goods or services, the Group grants the customer award credits.
These points provide a discount to customers that they would not receive without purchasing the goods or services (i.e., a material right). The promise to provide the discount to the customer is therefore a separate performance obligation.

The transaction price is allocated between the product, the service and the points on a relative stand-alone selling price basis. The stand-alone selling price per point is estimated based on the discount to be given when the points are redeemed by the customer and the likelihood of redemption, as evidenced by the Group’s historical experience. A contract liability is recognized for revenue relating to the loyalty points at the time of the initial sales transaction. Revenue from the loyalty points is recognized when the points are redeemed by the customer.

(6) Lease

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

1) The Group as lessor

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group’s net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group’s net investment outstanding in respect of the leases.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

2) The Group as lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the statement of financial position as a finance lease obligation.

Lease payments are apportioned between finance expenses and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance expenses are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets, in which case they are capitalized in accordance with the Group’s general policy on borrowing costs (see Note 2. (8)). Contingent rentals are recognized as expenses in the periods in which they are incurred.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating leases are recognized as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognized as a liability. The aggregate benefit of incentives is recognized as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

(7) Foreign currencies

The consolidated financial statements of the Group are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group entity are expressed in Korean won, which is the functional currency of the entity and the presentation currency for the consolidated financial statements.

In preparing the financial statements of the Group, transactions in currencies other than the Group's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the date of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;

- Exchange differences on transactions entered into in order to hedge certain foreign currency risks; and

- Exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are expressed in Korean won using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the date of the transactions are used. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity.

In case of a partial disposal (i.e. no loss of control) of a subsidiary that includes a foreign operation, the proportionate share of accumulated exchange differences is re-attributed to non-controlling interests in equity and is not recognized in profit or loss. For all other partial disposals (i.e., partial disposals of associates or joint arrangements that do not result in the Group losing significant influence or joint control), the proportionate share of the accumulated exchange differences is reclassified to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate. Exchange differences arising are recognized in other comprehensive income.

(8) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

To the extent that variable rate borrowings are used to finance a qualifying asset and are hedged in an effective cash flow hedge of interest rate risk, the effective portion of the derivative is recognized in other comprehensive income and reclassified to profit or loss when the qualifying asset impacts profit or loss. To the extent that fixed rate borrowings are used to finance a qualifying asset and are hedged in an effective fair value hedge of interest rate risk, the capitalized borrowing costs reflect the hedged interest rate.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

(9) Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attached to them and that the grants will be received.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

Government grants related to assets are presented in the statement of financial position by deducting the grant from the carrying amount of the asset. The related grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.
Government grants related to income are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate.

Government grants toward staff re-training costs are recognized as income over the periods necessary to match them with the related costs and are deducted in reporting the related expense.

Government grants relating to the acquisition of property, aircraft and equipment are treated as deferred income and released to profit or loss over the expected useful lives of the assets concerned.

(10) Employee Benefits

1) Short-term employee benefits

Short-term employee benefits payable within 12 months after the end of the reporting period in which the employees provided the related services are recognized in profit or loss when the service is rendered in exchange for the estimated future payments. Short-term employee benefits are measured at unamortized amounts.

2) Other long-term employee benefits

Other long-term employee benefits that are not to be paid within 12 months after the end of the reporting period in which the employees provided the related services are discounted to their present value based on the future benefits received in exchange for services rendered during the current and prior periods. Changes in remeasurement are recognized in profit or loss in the period in which they arise.

3) Retirement benefit

For defined retirement benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each reporting period. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in the consolidated statements of financial position with a charge or credit recognized in other comprehensive income in the period in which it occurs. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current service cost and past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

Net interest expense or income is recognized within finance costs, and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognized in the statement of financial position represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

The retirement benefit obligation recognized in the statement of financial position represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

A liability for a termination benefit is recognized at the earlier of when the entity can no longer withdraw the offer of the termination benefit and when the entity recognizes any related restructuring costs.

(11) Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the consolidated statements of comprehensive income (loss) because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future.

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

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realized, 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 tax liabilities and assets reflects the tax consequences 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.

Deferred tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to set off current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

For the purpose of measuring deferred tax liabilities and deferred tax assets for investment properties that are measured using the fair value model, the carrying amounts of such properties are presumed to be recovered entirely through sale, unless the presumption is rebutted. The presumption is rebutted when the investment property is depreciable and is held within a business model whose objective is to consume substantially all of the economic benefits embodied in the investment properties over time, rather than through sale.

3) Current and deferred taxes for the year

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

(12) Property, aircraft and equipment

Property, aircraft and equipment, except land, are stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. Land shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated impairment losses. Revaluation shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

The cost of an item of property, aircraft and equipment is directly attributable to its purchase or construction, which includes any costs directly attributable to bringing the asset to the location and the condition necessary for it to be capable of operating in the manner intended by management. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in the carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land and leased land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

Description		Useful lives (years)
Buildings, structures		20–40
Machinery		4–15
Aircraft, leased aircraft	Fuselage, etc.	6–15
	Periodical large repair	2.8–12
Engines, leased engines	Engines	15
	Periodical large repair	3.3–10.7
Aircraft parts		15
Vehicles		4–9
Others, other leased assets		2–15
Leasehold improvements		1–11

If each part of an item of property, aircraft and equipment has a cost that is significant in relation to the total cost of the item, it is depreciated separately.

The Group reviews the depreciation method; the estimated useful lives and residual values of property, aircraft and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

An item of property, aircraft and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized. The revaluation surplus included in equity in respect of an item of property, aircraft and equipment may be transferred directly to retained earnings when the asset is derecognized.

(13) Investment properties

Investment properties are properties held to earn rentals or for capital appreciation (including property under construction for such purposes). Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are reported at cost, less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, all other investment property is depreciated based on the respective assets estimated useful lives of 40 years using the straight-line method.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from the disposal. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

(14) Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost, less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost, less accumulated impairment losses.

2) Internally generated intangible assets — research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

Expenditure arising from development (or from the development phase of an internal project) is recognized as an intangible asset if, and only if, the development project is designed to produce new or substantially improved products, and the Group can demonstrate the technical and economic feasibility and measure reliably the resources attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is recognized in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

An intangible asset is derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

Intangible assets with finite useful lives are amortized based on the estimated useful lives of the assets as follows:

Description	Useful lives (years)
Facility usage rights	19–30
Other intangible assets	3.9–20

Among the Group's intangible assets, useful life of a membership is estimated to be infinite since the usable period is not limited in accordance with the terms of the contract and the economic benefits are expected to be continuously generated from the asset during the holding period.

5) Patents and trademarks

Patents and trademarks are measured initially at purchase cost and are amortized on a straight-line basis over their estimated useful lives.

(15) Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value, less costs to sell or value in use. If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount and the reduced amount is recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

(16) Inventories

Inventories are stated at the lower of cost or net realizable value. The cost of inventories is measured by the following evaluation method:

Description		Evaluation method
Merchandise		First-in, first-out method
Goods		Total average method
	Aerospace	Moving average method
Raw materials	In-flight meals	First-in, first-out method
	Air transport/Aerospace	Moving average method
Supplies	In-flight meals	First-in, first-out method
Materials in transit		Specific identification method

Cost of inventories consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognized as an expense (cost of sales) in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

(17) Provisions

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

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material). The discount rate used is a pretax rate that reflects current market assessments of the time value of money and the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage is recognized in profit or loss as borrowing cost.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

(18) Financial Instruments

Financial assets and financial liabilities are recognized in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instrument.
Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognized immediately in profit or loss.

(19) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognized financial assets are measured subsequently in their entirety at either amortized cost or fair value, depending on the classification of the financial assets.

1) Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortized cost:

- The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and

- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments that meet the following conditions are measured subsequently at fair value through other comprehensive income (FVTOCI):

- The financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets; and

- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

By default, all other financial assets are measured subsequently at fair value through profit or loss (FVTPL). Despite the foregoing, the Group may make the following irrevocable election / designation at initial recognition of a financial asset:

- The Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if certain criteria are met (see Note 2. (19) 1) C. below); and

- The Group may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch (see Note 2. (19) 1) D. below).

A. Amortized cost and effective interest method

The effective interest method is a method of calculating the amortized cost of a debt instrument and allocating interest income over the relevant period. For financial assets other than purchased or originated credit-impaired financial assets (i.e. assets that are credit-impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) excluding expected credit losses, through the expected life of the debt instrument, or, where appropriate, a shorter period, to the gross carrying amount of the debt instrument on initial recognition. For purchased or originated credit-impaired financial assets, a credit-adjusted effective interest rate is calculated by discounting the estimated future cash flows, including expected credit losses, to the amortized cost of the debt instrument on initial recognition.

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

Interest income is recognized using the effective interest method for debt instruments measured subsequently at amortized cost and at FVTOCI. For financial assets other than purchased or originated credit-impaired financial assets, interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognized by applying the effective interest rate to the amortized cost of the financial asset. If, in subsequent reporting periods, the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognized by applying the effective interest rate to the gross carrying amount of the financial asset.

For purchased or originated credit-impaired financial assets, the Group recognizes interest income by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit-impaired.

Interest income is recognized in profit or loss and is included in the "finance income - interest income" line item (see Note 34).

B. Debt instruments classified as at FVTOCI

The corporate bonds held by the Group are classified as at FVTOCI. Fair value is determined in the manner described in note 39. The corporate bonds are initially measured at fair value plus transaction costs. Subsequently, changes in the carrying amount of these corporate bonds as a result of foreign exchange gains and losses, impairment gains or losses, and interest income calculated using the effective interest method are recognized in profit or loss. The amounts that are recognized in profit or loss are the same as the amounts that would have been recognized in profit or loss if these corporate bonds had been measured at amortized cost. All other changes in the carrying amount of these corporate bonds are recognized in other comprehensive income and accumulated under the heading of investments revaluation reserve. When these corporate bonds are derecognized, the cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss.

C. Equity instruments designated as at FVTOCI

On initial recognition, the Group may make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is a contingent consideration recognized by an acquirer in a business combination.

A financial asset is held for trading if:

- It has been acquired principally for the purpose of selling it in the near term; or

- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has evidence of a recent actual pattern of short-term profit-taking; or

- It is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

Investments in equity instruments at FVTOCI are initially measured at fair value plus transaction costs. Subsequently, they are measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in the investments revaluation reserve. The cumulative gain or loss is not to be reclassified to profit or loss on disposal of the equity investments; instead, it is transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss in accordance with K-IFRS 1109, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the ‘finance income’ line item (see Note 34) in profit or loss.

D. Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortized cost or FVTOCI are measured at FVTPL. Specifically:

- Investments in equity instruments are classified as at FVTPL, unless the Group designates an equity investment that is neither held for trading nor a contingent consideration arising from a business combination as at FVTOCI on initial recognition (see Note 2. (19) 1) C. above).

- Debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria (see Note 2. (19) 1) A. and B. above) are classified as at FVTPL. In addition, debt instruments that meet either the amortized cost criteria or the FVTOCI criteria may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency (so called ‘accounting mismatch’) that would arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases. The Group has not designated any debt instruments as at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship (see Note 35). The net gain or loss recognized in profit or loss includes any dividend or interest earned on the financial asset and is included in the 'other gains and losses' line item (see Note 34). Fair value is determined in the manner described in note 39.

2) Foreign exchange gains and losses

The carrying amount of financial assets that are denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of each reporting period. Specifically;

- For financial assets measured at amortized cost that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item (see Note 35);

- For debt instruments measured at FVTOCI that are not part of a designated hedging relationship, exchange differences on the amortized cost of the debt instrument are recognized in profit or loss in the 'other gains and losses' line item (see Note 35). Other exchange differences are recognized in other comprehensive income in the investments revaluation reserve;

- For financial assets measured at FVTPL that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item (see Note 35); and
- For equity instruments measured at FVTOCI, exchange differences are recognized in other comprehensive income in the investments revaluation reserve.

3) Impairment of financial assets

The Group recognizes a loss allowance for expected credit losses on investments in debt instruments that are measured at amortized cost or at FVTOCI, lease receivables, trade receivables and contract assets, as well as on financial guarantee contracts. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group always recognizes lifetime ECL for trade receivables, contract assets and lease receivables. The expected credit losses on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

A. Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort. Forward-looking information considered includes the future prospects of the industries in which the Group's debtors operate, obtained from economic expert reports, financial analysts, governmental bodies, relevant think-tanks and other similar organizations, as well as consideration of various external sources of actual and forecast economic information that relate to the Group's core operations.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- An actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;

- Significant deterioration in external market indicators of credit risk for a particular financial instrument, e.g., a significant increase in the credit spread, the credit default swap prices for the debtor, or the length of time or the extent to which the fair value of a financial asset has been less than its amortized cost;

- An actual or expected significant deterioration in the operating results of the debtor;

- Significant increases in credit risk on other financial instruments of the same debtor;

- An actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

Despite the foregoing, the Group assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if:

(1)The financial instrument has a low risk of default,
(2)The debtor has a strong capacity to meet its contractual cash flow obligations in the near term, and
(3)Adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

The Group considers a financial asset to have low credit risk when the asset has external credit rating of 'investment grade' in accordance with the globally understood definition, or if an external rating is not available, the asset has an internal rating of 'performing'. Performing means that the counterparty has a strong financial position and there is no past due amounts.

For financial guarantee contracts, the date that the Group becomes a party to the irrevocable commitment is considered to be the date of initial recognition for the purposes of assessing the financial instrument for impairment. In assessing whether there has been a significant increase in the credit risk since initial recognition of a financial guarantee contracts, the Group considers the changes in the risk that the specified debtor will default on the contract.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

B. Definition of default

The Group considers the following as constituting an event of default for internal credit risk management purposes as historical experience indicates that financial assets that meet either of the following criteria are generally not recoverable:

<u>When there is a breach of financial covenants by the debtor</u>

Irrespective of the above analysis, the Group considers that default has occurred when a financial asset is more than 90 days past due, unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

C. Credit-impaired financial assets

- Significant financial difficulty of the issuer or the borrower;
- A breach of contract, such as a default or past due event (see Note 2. (19) 3) B. above);
- The lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- It is becoming probable that the borrower will enter bankruptcy or other financial reorganization; or
- The disappearance of an active market for that financial asset because of financial difficulties.

D. Write-off policy

The Group writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g., when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are more than two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. Any recoveries made are recognized in profit or loss.

E. Measurement and recognition of expected credit losses

The measurement of expected credit losses is a function of the probability of default, loss given default (i.e., the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information as described above. As for the exposure at default, for financial assets, this is represented by the assets' gross carrying amount at the reporting date; for financial guarantee contracts, the exposure includes the amount drawn down at at the reporting date, together with any additional amounts expected to be drawn down in the future by default date determined based on historical trend, the Group's understanding of the specific future financing needs of the debtors, and other relevant forward-looking information.

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the original effective interest rate. For a lease receivable, the cash flows used for determining the expected credit losses is consistent with the cash flows used in measuring the lease receivable in accordance with K-IFRS 1017 *'Leases.'*

For a financial guarantee contract, as the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed, the expected loss allowance is the expected payments to reimburse the holder for a credit loss that it incurs, less any amounts that the Group expects to receive from the holder, the debtor or any other party.

If the Group has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Group measures the loss allowance at an amount equal to 12-month ECL at the current reporting date, except for assets for which simplified approach was used.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and accumulated in the investment revaluation reserve, and does not reduce the carrying amount of the financial asset in the consolidated statement of financial position.

4) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognize a collateralized borrowing for the proceeds received.

On derecognition of a financial asset measured at amortized cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument that the Group has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

(20) Financial liabilities and equity instruments

1) Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement and the definitions of financial liability and an equity instrument.

2) Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognized at the proceeds are received, net of direct issue costs.

Repurchase of the Group's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments.

3) Financial liabilities

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVTPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

4) Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- It is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and K-IFRS 1109 permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship (see Hedge accounting policy). The net gain or loss recognized in profit or loss incorporates any interest paid on the financial liability and is included in the 'other gains and losses' line item (see Note 35) in profit or loss.

However, for financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability's credit risk that is recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Group that are designated by the Group as at FVTPL are recognized in profit or loss.

Fair value is determined in the manner described in note 39.

5) Financial liabilities measured subsequently at amortized cost

Financial liabilities that are not (i) contingent consideration of an acquirer in a business combination, (ii) held-for-trading or (iii) designated as at FVTPL, are measured subsequently at amortized cost using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or, where appropriate a shorter period, to the amortized cost of a financial liability.

6) Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer 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 terms of a debt instrument.

Financial guarantee contract liabilities are measured initially at their fair values and, if not designated as at FVTPL and do not arise from a transfer of an asset, are measured subsequently at the higher of:

- The amount of the loss allowance determined in accordance with K-IFRS 1109 (see financial assets above); and
- The amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with the revenue recognition policies set out above.

7) Foreign exchange gains and losses

For financial liabilities that are denominated in a foreign currency and are measured at amortized cost at the end of each reporting period, the foreign exchange gains and losses are determined based on the amortized cost of the instruments. These foreign exchange gains and losses are recognized in the 'other gains and losses' line item in profit or loss (see Note 35) for financial liabilities that are not part of a designated hedging relationship. For those which are designated as a hedging instrument for a hedge of foreign currency risk foreign exchange gains and losses are recognized in other comprehensive income and accumulated in a separate component of equity.

The fair value of financial liabilities denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period. For financial liabilities that are measured as at FVTPL, the foreign exchange component forms part of the fair value gains or losses and is recognized in profit or loss for financial liabilities that are not part of a designated hedging relationship.

8) Derecognition of financial liabilities

The Group derecognizes financial liabilities when, and only when, the Group's obligations are discharged, canceled or expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

When the Group exchanges with the existing lender one debt instrument into another one with substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Group accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective rate is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between: (1) the carrying amount of the liability before the modification; and (2) the present value of the cash flows after modification should be recognized in profit or loss as the modification gain or loss within other gains and losses.

(21) Derivative financial instruments

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate, oil price risk and foreign exchange rate risks including oil price option, interest rate swaps and cross-currency interest rate swaps.

Derivatives are recognized initially at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each reporting date. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset whereas a derivative with a negative fair value is recognized as a financial liability. Derivatives are not offset in the financial statements unless the Group has both legal right and intention to offset. The impact of the Master Netting Agreements on the Group's financial position is disclosed in note 39. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

(22) Assignment of greenhouse gas emission rights and accounting for transaction system

It is highly probable that resources will be leaked in order to fulfill the obligation for the emission liability arising from the implementation of the "ACT ON THE ALLOCATION AND TRADING OF GREENHOUSE-GAS EMISSION PERMITS", and the amount of money required for the fulfillment of those obligations can be reliably estimated if there is, the Group recognize it. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at the end of the reporting period. The Group derecognized an emission right liability when the emission allowance is submitted to government.

(23) Approval of consolidated financial statements

The accompanying consolidated financial statements were approved by the board of directors on January 29, 2019, and they will be finally approved during the general meeting of shareholders on March 27, 2019.

3. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY:

In the application of the Group's accounting policies, which are described in Note 2, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

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.

1) Impact on mileage revenue accounting

The Group has treated mileage provided to its customers as a transaction that contains complex components, and has proportionately allocated the fair value of consideration received or receivable between values of services provided and the values of the mileage. K-IFRS 1115 requires entities to allocate the transaction price to each performance obligation identified in the contract on a relative stand-alone selling price basis. In order to determine each performance obligation's stand-alone selling price, the Group is planning to use the 'adjusted market assessment approach.'

2) Calculation of loss allowance

When measuring ECL, the Group uses reasonable and supportable forward looking information, which is based on assumptions for the future movement of different economic drivers and how these drivers will affect each other.

Loss given default is an estimate of the loss arising on default. It is based on the difference between the contractual cash flows due and those that the lender would expect to receive, taking into account cash flows from collateral and integral credit enhancements.

Probability of default constitutes a key input in measuring ECL. Probability of default is an estimate of the likelihood of default over a given time horizon, the calculation of which includes historical data, assumptions and expectations of future conditions.

3) Defined benefit plan

The Group's defined benefit obligation is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Group's best estimates of the variables in determining the cost of providing postretirement benefits, such as discount rates, rates of expected future salary increases and mortality rates. Significant estimation uncertainty is likely to persist in making such assumptions due to the long-term nature of postretirement benefit plan. At the end of this year, net defined benefit obligation of the plan is ₩1,493,987 million ($1,336,184 thousand) (prior year: ₩ 1,144,539 million ($1,023,646 thousand)), as detailed in Note 23.

4) Valuation of financial instruments

As described in Notes 39, the Group uses valuation techniques that include inputs that are not based on observable market data to estimate the fair value of certain type of financial instruments. Note 39 provide detailed information about key assumptions used in the determination of the fair value of financial instruments, as well as the detailed sensitivity analysis for these assumptions. The directors believe that the chosen valuation techniques and assumptions used are appropriate in determining the fair value of financial instruments.

5) Probability on the realization of unused deferred Tax Assets

In consideration of operating performance of the Group and estimate of the future operating performance, the Group recognizes deferred tax asset in relation to unused tax loss carryforward.

4. SEGMENT INFORMATION:

(1) The Group's segment information is prepared for the purpose of resource allocation and assessment of segment performance. The Group's reportable segments are as follows:

Segment	Type of goods and services	Customers' information
Air transport	Passenger and cargo transportation	Individual, enterprises, government, etc.
Aerospace	Maintenance of aircraft and manufacture of aircraft parts	Ministry of National Defense, etc.
Hotel, etc.	Accommodation service, Limousine bus transportation, etc.	Individual, etc.

(2) Operating results by reportable segment for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won					
	Air transport	Aerospace	Hotel	Others	Adjustment for consolidation	Total
	(In millions)					
Total sales	₩ 12,435,020	₩ 650,518	₩ 166,203	₩ 286,010	₩ (517,475)	₩ 13,020,276
Internal sales	(384,654)	-	(10,037)	(122,784)	517,475	-
Net sales	12,050,366	650,518	156,166	163,226	-	13,020,276
Operating income	651,322	14,371	(56,584)	32,030	(849)	640,290
Depreciation and amortization	(1,656,165)	(16,427)	(57,541)	(11,315)	(229)	(1,741,677)
Total assets	23,505,172	1,241,743	1,606,096	432,231	(1,205,589)	25,579,653
Total liabilities						22,547,870

	Translation into U.S. dollars (Note 2)					
	Air transport	Aerospace	Hotel	Others	Adjustment for consolidation	Total
	(In thousands)					
Total sales	$ 11,121,564	$ 581,806	$ 148,648	$ 255,799	$ (462,816)	$ 11,645,001
Internal sales	(344,025)	-	(8,977)	(109,814)	462,816	-
Net sales	10,777,539	581,806	139,671	145,985	-	11,645,001
Operating income	582,526	12,853	(50,607)	28,647	(760)	572,659
Depreciation and amortization	(1,481,232)	(14,692)	(51,463)	(10,119)	(205)	(1,557,711)
Total assets	21,022,424	1,110,583	1,436,452	386,575	(1,078,249)	22,877,785
Total liabilities						20,166,237

2017

	Korean won					
	Air transport	Aerospace	Hotel	Others	Adjustment for consolidation	Total
	(In millions)					
Total sales	₩ 11,464,250	₩ 727,993	₩ 91,573	₩ 305,963	₩ (497,568)	₩ 12,092,211
Internal sales	(361,115)	-	(2,832)	(133,621)	497,568	-
Net sales	11,103,135	727,993	88,741	172,342	-	12,092,211
Operating income	986,872	(32,464)	(50,088)	35,957	(495)	939,782
Depreciation and amortization	(1,619,581)	(34,262)	(28,201)	(10,729)	(242)	(1,693,015)
Total assets	22,650,630	1,134,682	1,631,340	431,467	(1,199,445)	24,648,674
Total liabilities						20,897,571

	Translation into U.S. dollars (Note 2)					
	Air transport	Aerospace	Hotel	Others	Adjustment for consolidation	Total
	(In thousands)					
Total sales	$ 10,253,331	$ 651,099	$ 81,900	$ 273,646	$ (445,012)	$ 10,814,964
Internal sales	(322,972)	-	(2,533)	(119,507)	445,012	-
Net sales	9,930,359	651,099	79,367	154,139	-	10,814,964
Operating income	882,633	(29,035)	(44,797)	32,159	(443)	840,517
Depreciation and amortization	(1,448,512)	(30,643)	(25,223)	(9,596)	(215)	(1,514,189)
Total assets	20,258,143	1,014,830	1,459,029	385,893	(1,072,753)	22,045,142
Total liabilities						18,690,251

(3) Operating results by geographical area for the year ended December 31, 2018 and 2017, are as follows:

2018

	Korean won					
	Local companies		Overseas companies		Adjustment	
	Domestic	International	Americas	Asia and others	for consolidation	Total
	(In millions)					
Total sales	₩ 1,923,003	₩ 11,477,980	₩ 136,096	₩ 672	₩ (517,475)	₩ 13,020,276
Internal sales		(495,189)	(21,860)	(426)	517,475	-
Net sales		12,905,794	114,236	246	-	13,020,276
Operating income		695,184	(54,344)	299	(849)	640,290
Total assets		25,196,693	1,584,876	3,673	(1,205,589)	25,579,653
Total liabilities						22,547,870

	Translation into U.S. dollars (Note 2)					
	Local companies		Overseas companies		Adjustment	
	Domestic	International	Americas	Asia and others	for consolidation	Total
	(In thousands)					
Total sales	$ 1,719,884	$ 10,265,611	$ 121,721	$ 601	$ (462,816)	$ 11,645,001
Internal sales		(442,884)	(19,551)	(381)	462,816	-
Net sales		11,542,611	102,170	220	-	11,645,001
Operating income		621,755	(48,604)	268	(760)	572,659
Total assets		22,535,276	1,417,473	3,285	(1,078,249)	22,877,785
Total liabilities						20,166,237

2017

	Korean won					
	Local companies		Overseas companies		Adjustment	
	Domestic	International	Americas	Asia and others	for consolidation	Total
	(In millions)					
Total sales	₩ 2,087,881	₩ 10,418,713	₩ 59,919	₩ 23,266	₩ (497,568)	₩ 12,092,211
Internal sales		(465,848)	(14,749)	(16,971)	497,568	-
Net sales		12,040,746	45,170	6,295	-	12,092,211
Operating income		987,955	(50,428)	2,750	(495)	939,782
Total assets		24,220,185	1,608,810	19,124	(1,199,445)	24,648,674
Total liabilities						20,897,571

	Translation into U.S. dollars (Note 2)					
	Local companies		Overseas companies		Adjustment	
	Domestic	International	Americas	Asia and others	for consolidation	Total
	(In thousands)					
Total sales	$ 1,867,347	$ 9,318,230	$ 53,590	$ 20,809	$ (445,012)	$ 10,814,964
Internal sales		(416,643)	(13,192)	(15,177)	445,012	-
Net sales		10,768,934	40,398	5,632	-	10,814,964
Operating income		883,601	(45,101)	2,460	(443)	840,517
Total assets		21,661,914	1,438,878	17,103	(1,072,753)	22,045,142
Total liabilities						18,690,251

(4) There is no single customer who accounted for more than 10% of the Group's revenue for the year ended December 31, 2018 and 2017.

5. CASH AND CASH EQUIVALENTS:

Cash and cash equivalents as of December 31, 2018 and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Cash on hand	₩ 137	₩ 180	$ 122	$ 161
Bank deposits	1,503,814	761,055	1,344,974	680,668
	₩ 1,503,951	₩ 761,235	$ 1,345,096	$ 680,829

6. RESTRICTED DEPOSITS:

Restricted deposits as of December 31, 2018, consist of the following:

	(In millions of won and in thousands of U.S. dollars) 2018	Remark
Cash and cash equivalents	₩ 246,896	Deposit of trust account for payment purposes related to asset-backed security loans(“ABS”) and others
Short-term financial instruments	₩ 51,020	Performance guarantee deposit on the freight and pledged for the floating rate note contract extension and rental guarantee for Incheon International Airport terminal and others
	$ 4,790	Guarantee deposit on North America L/C and others
Financial assets at FV	₩ 16,093	Pledged for equity contributed to Korea Defense Industry Association and others
Long-term financial instruments	₩ 1,650	Bank account deposit and others
	₩ 315,659	
	$ 4,790	

7. TRADE AND OTHER RECEIVABLES:

(1) Trade and other receivables as of December 31, 2018 and 2017, consist of the following:

2018

	Korean won		Translation into U.S. dollars (Note 2)	
	Current	Non-current	Current	Non-current
	(In millions)		(In thousands)	
Trade receivables	₩ 706,009	₩ -	$ 631,436	$ -
Loss allowance	(255)	-	(228)	-
Discount on present value	-	-	-	-
	705,754	-	631,208	-
Loans	-	40	-	36
Non-trade receivables	117,574	-	105,155	-
Loss allowance	(46,838)	-	(41,891)	-
	70,736	-	63,264	-
Accrued revenues	67,665	-	60,518	-
Loss allowance	-	-	-	-
	67,665	-	60,518	-
	₩ 844,155	₩ 40	$ 754,990	$ 36

2017

	Korean won		Translation into U.S. dollars (Note 2)	
	Current	Non-current	Current	Non-current
	(In millions)		(In thousands)	
Trade receivables	₩ 643,113	₩ -	$ 575,183	$ -
Loss allowance	(6,786)	-	(6,069)	-
Discount on present value	(291)	-	(260)	-
	636,036	-	568,854	-
Loans	-	50	-	45
Non-trade receivables	111,453	-	99,680	-
Loss allowance	(46,794)	-	(41,851)	-
	64,659	-	57,829	-
Accrued revenues	56,878	-	50,870	-
Loss allowance	(560)	-	(500)	-
	56,318	-	50,370	-
	₩ 757,013	₩ 50	$ 677,053	$ 45

(2) Credit risk and details of loss allowance accounts as of December 31, 2018 and 2017, are as follows:

The above trade and other receivables are classified as 'loans and receivables' and measured at amortized cost. The Group estimates the loss allowance based on each receivable analysis because the credit offering period for the sales of the Group varies with the sales' categories and customers.

1) Aging analysis of the trade receivables that are overdue, but are not impaired as of December 31, 2018 and 2017, are as follows:

2018

	Korean won				
	Within 6 months	6–12 months	1–3 years	More than 3 years	Total
			(In millions)		
Trade receivables	₩ 130,043	₩ 75	₩ 1,423	₩ 12	₩ 131,553
Loss allowance	(220)	-	-	-	(220)
	₩ 129,823	₩ 75	₩ 1,423	₩ 12	₩ 131,333

	Translation into U.S. dollars (Note 2)				
	Within 6 months	6–12 months	1–3 years	More than 3 years	Total
			(In thousands)		
Trade receivables	$ 116,307	$ 67	$ 1,273	$ 11	$ 117,658
Loss allowance	(197)	-	-	-	(197)
	$ 116,110	$ 67	$ 1,273	$ 11	$ 117,461

2017

	Korean won				
	Within 6 months	6–12 months	1–3 years	More than 3 years	Total
			(In millions)		
Trade receivables	₩ 39,933	₩ 394	₩ 71	₩ 18	₩ 40,416
Loss allowance	(333)	(211)	(1)	(18)	(563)
	₩ 39,600	₩ 183	₩ 70	₩ -	₩ 39,853

	Translation into U.S. dollars (Note 2)				
	Within 6 months	6–12 months	1–3 years	More than 3 years	Total
			(In thousands)		
Trade receivables	$ 35,715	$ 352	$ 64	$ 16	$ 36,147
Loss allowance	(297)	(189)	(1)	(16)	(503)
	$ 35,418	$ 163	$ 63	$ -	$ 35,644

2) Trade receivables are not impaired as of December 31, 2018 and 2017.

3) Changes in allowance for trade and other receivables for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won							
	Non-impaired trade receivables							
	Collective evaluation target		Individual evaluation target		Impaired trade receivables		Total	
	(In millions)							
Beginning balance restated								
Provision under K-IFRS 1039	₩	6,786	₩	-	₩	-	₩	6,786
Provision under K-IFRS 1109		-		-		-		-
Remeasurement of loss allowance		(6,554)		-		-		(6,554)
Increase or decrease due to the increase or recovery of a receivable		23		-		-		23
Ending balance	₩	255	₩	-	₩	-	₩	255

	Translation into U.S. dollars (Note 2)							
	Non-impaired trade receivables							
	Collective evaluation target		Individual evaluation target		Impaired trade receivables		Total	
	(In thousands)							
Beginning balance restated								
Provision under K-IFRS 1039	$	6,069	$	-	$	-	$	6,069
Provision under K-IFRS 1109		-		-		-		-
Remeasurement of loss allowance		(5,861)		-		-		(5,861)
Increase or decrease due to the increase or recovery of a receivable		20		-		-		20
Ending balance	$	228	$	-	$	-	$	228

2017

	Korean won		Translation into U.S. dollars (Note 2)	
	Trade receivables		Trade receivables	
	(In millions)		(In thousands)	
Beginning balance	₩	6,260	$	5,599
Bad debt expenses		678		607
Write-off		(152)		(137)
Ending balance	₩	6,786	$	6,069

K-IFRS 1109 was applied prospectively as of December 31, 2018, and changes in allowance for doubtful accounts are based on K-IFRS 1039 as of December 31, 2017.

The Group has judged the recoverability of the trade receivables by considering the changes in credit rating from the beginning date of credit offering to the end of the reporting period. The concentration of credit risk is limited because there are a lot of customers and no interconnection between them.

8. FINANCIAL ASSETS AT FV AND AFS FINANCIAL ASSETS:

Financial assets at FV as of December 31, 2018, and AFS financial assets as of December 31, 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Financial assets at FVTOCI (*1):				
Listed securities	₩ 99,875	₩ 127,854	$ 89,326	$ 114,349
Unlisted securities	48,338	54,965	43,232	49,158
	148,213	182,819	132,558	163,507
Financial assets at FVTPL				
Beneficiary certificates	5,600	4,200	5,008	3,756
Equity securities (*2)	16,120	15,144	14,418	13,546
	21,720	19,344	19,426	17,302
Government and public bonds, etc.	-	6	-	6
	₩ 169,933	₩ 202,169	$ 151,984	$ 180,815

(*1) The Group has employed an irrevocable option, designating equity instrument for the purpose of strategic investment, not for trading, as financial assets at FVTOCI.

(*2) The above investments in other equity securities amounting to ₩16,093 million ($14,393 thousand) are pledged to the Korea Defense Industry Association as collateral for performance guarantee (see Note 6).

The Group has not recognized an impairment loss of financial assets at FV in for the years ended December 31, 2018, and has recognized an impairment loss of ₩715 million ($667 thousand) of AFS financial assets for the years ended December 31, 2017. There are no reversal of impairment loss in financial assets at FV for the years ended December 31, 2018 and AFS financial assets for the years ended December 31, 2017.

Meanwhile, the fair value of financial assets is in Note 39.

9. OTHER FINANCIAL ASSETS:

(1) Other financial assets as of December 31, 2018, and 2017, consist of the following:

	Korean won			
	2018		2017	
	Current	Non-current	Current	Non-current
	(In millions)			
Guarantee deposits	₩ -	₩ 210,852	₩ -	₩ 262,351
Others	10	-	15	-
	₩ 10	₩ 210,852	₩ 15	₩ 262,351

	Translation into U.S. dollars (Note 2)			
	2018		2017	
	Current	Non-current	Current	Non-current
	(In thousands)			
Guarantee deposits	$ -	$ 188,580	$ -	$ 234,640
Others	9	-	13	-
	$ 9	$ 188,580	$ 13	$ 234,640

(2) There are no other financial assets overdue or impaired for the year ended December 31, 2018 and 2017.

10. INVENTORIES:

Inventories as of December 31, 2018, and 2017, consist of the following:

	Korean won											
	2018						2017					
	Acquisition cost		Valuation allowance		Book value		Acquisition cost		Valuation allowance		Book value	
	(In millions)											
Merchandise	₩	19,884	₩	-	₩	19,884	₩	19,888	₩	-	₩	19,888
Work in progress		262,299		(4,709)		257,590		-		-		-
Finished goods		26,444		(984)		25,460		12,336		-		12,336
Raw materials		121,278		-		121,278		117,869		-		117,869
Supplies		629,448		(67,015)		562,433		459,252		-		459,252
Materials in transit		43,471		-		43,471		73,342		-		73,342
	₩	1,102,824	₩	(72,708)	₩	1,030,116	₩	682,687	₩	-	₩	682,687

	Translation into U.S. dollars (Note 2)											
	2018						2017					
	Acquisition cost		Valuation allowance		Book value		Acquisition cost		Valuation allowance		Book value	
	(In thousands)											
Merchandise	$	17,784	$	-	$	17,784	$	17,787	$	-	$	17,787
Work in progress		234,593		(4,211)		230,382		-		-		-
Finished goods		23,651		(881)		22,770		11,033		-		11,033
Raw materials		108,468		-		108,468		105,419		-		105,419
Supplies		562,962		(59,937)		503,025		410,744		-		410,744
Materials in transit		38,880		-		38,880		65,595		-		65,595
	$	986,338	$	(65,029)	$	921,309	$	610,578	$	-	$	610,578

The Group-recognized expenses on inventories for the year ended December 31, 2018, include the valuation losses of ₩72,708 million ($65,028 thousand) as a reduction of inventories to net realizable value.

11. FINANCE LEASE RECEIVABLES:

(1) The Group has offered the finance leases of the aircraft, and the minimum lease payments and present value of the finance leases as of December 31, 2018, and 2017, are as follows:

	Korean won				Translation into U.S. dollars (Note 2)			
Description	2018		2017		2018		2017	
	(In millions)				(In thousands)			
Less than one year	₩	44,230	₩	77,540	$	39,558	$	69,350
One year to five years		106,689		107,944		95,420		96,542
		150,919		185,484		134,978		165,892
Present value of discounts		(21,956)		(28,454)		(19,637)		(25,448)
		128,963		157,030		115,341		140,444
Less: current portion of finance lease receivables		(29,634)		(61,156)		(26,504)		(54,697)
	₩	99,329	₩	95,874	$	88,837	$	85,747

(2) Finance lease receivables were not impaired for the year ended December 31, 2018 and 2017.

12. INVESTMENTS IN SUBSIDIARIES:

(1) Investments in subsidiaries as of December 31, 2018, and 2017, consist of the following:

Description	Principal business	Location	Ownership of Group 2018	Ownership of Group 2017
			(%)	
Korea Airport Service Co., Ltd.	Airport support service	Korea	59.54	59.54
Hanjin Information Systems & Telecommunication Co., Ltd	Software development and supply	Korea	99.35	99.35
Air Total Service Co., Ltd.	Transportation and hotel management service	Korea	100.00	100.00
Hanjin International Corp.	Hotel and rental service	USA	100.00	100.00
Hanjin Central Asia LLC.	Hotel business	Uzbekistan	100.00	100.00
IAT Co., Ltd.	Aircraft engine repair service	Korea	86.13	86.13
WLD Co., Ltd.	Sports and leisure service	Korea	100.00	100.00
Korea Global Logistics System Co., Ltd.	Telecommunication service	Korea	95.00	95.00
Air Korea Co., Ltd.	Airport support service	Korea	100.00	100.00
TAS	Seconding personnel service	USA	100.00	100.00
Cyber Sky Co., Ltd.	Online sales	Korea	100.00	100.00
KAL 9 Asset Securitization Specialty Company (*1)(*2)	Issuance and repayment of ABS loans	Korea	-	0.50
KAL 11 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 11B Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 11C Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 12 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 14 Asset Securitization Specialty Company (*1)(*2)	Issuance and repayment of ABS loans	Korea	-	0.50
KAL 15 Asset Securitization Specialty Company (*1)(*2)	Issuance and repayment of ABS loans	Korea	-	0.50
KAL 16 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 17 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 18 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 19 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 20 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 20A Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 21 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	0.50
KAL 22 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	-
KAL 23 Asset Securitization Specialty Company (*1)	Issuance and repayment of ABS loans	Korea	0.50	-

(*1) The Group classified KAL Asset Securitization Specialty Companies as investments in subsidiaries because the Group controls an investee when it is exposed or has the rights to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

(*2) The liquidation procedures for the subsidiaries were completed for the year ended December 31, 2018, and were excluded from investments in subsidiaries.

(2) Financial information of the Group's major subsidiaries as of December 31, 2018, is as follows:

	Korean won	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In millions)	
Current assets	₩ 189,720	₩ 60,766
Non-current assets	222,746	35,215
Total assets	412,466	95,981
Current liabilities	41,639	23,038
Non-current liabilities	54,784	6,750
Total liabilities	96,423	29,788
Total shareholders' equity	₩ 316,043	₩ 66,193

	Translation into U.S. dollars (Note 2)	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In thousands)	
Current assets	$ 169,680	$ 54,347
Non-current assets	199,219	31,496
Total assets	368,899	85,843
Current liabilities	37,241	20,604
Non-current liabilities	48,997	6,038
Total liabilities	86,238	26,642
Total shareholders' equity	$ 282,661	$ 59,201

(3) Financial performances of the Group's major subsidiaries for the year ended December 31, 2018, is as follows:

	Korean won	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In millions)	
Sales	₩ 480,295	₩ 157,122
Operating income	24,397	5,802
Net income	18,603	3,931

	Translation into U.S. dollars (Note 2)	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In thousands)	
Sales	$ 429,563	$ 140,526
Operating income	21,820	5,190
Net income	16,638	3,516

(4) Cash flows of the Group's major subsidiaries for the year ended December 31, 2018, is as follows:

	Korean won	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In millions)	
Cash flows from operating activities	₩ 10,692	₩ 10,076
Cash flows from investing activities	(14,820)	(13,030)
Cash flows from financing activities	(1,663)	(783)
Net changes in cash and cash equivalents	(5,791)	(3,737)
Changes in cash and cash equivalents due to foreign currency translation	(15)	-
Beginning balance	16,948	7,740
Ending balance	₩ 11,142	₩ 4,003

	Translation into U.S. dollars (Note 2)	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In thousands)	
Cash flows from operating activities	$ 9,562	$ 9,011
Cash flows from investing activities	(13,255)	(11,654)
Cash flows from financing activities	(1,486)	(699)
Net changes in cash and cash equivalents	(5,179)	(3,342)
Changes in cash and cash equivalents due to foreign currency translation	(13)	-
Beginning balance	15,158	6,922
Ending balance	$ 9,966	$ 3,580

The above cash flow is the amount before separating internal transactions based on the amounts on separate financial statements.

(5) The ownership ratio of non-controlling interests' financial position as of December 31, 2018, financial performances for the year ended December 31, 2018, and dividend paid to non-controlling interests of major subsidiaries are as follows:

	Korean won	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In millions)	
Ownership ratio (*)	38.36%	0.65%
Non-controlling interests	₩ 122,999	₩ 430
Net income attributable to non-controlling interests	7,067	26
Dividend paid to non-controlling interests	(587)	(2)

	Translation into U.S. dollars (Note 2)	
	Korea Airport Service Co., Ltd.	Hanjin Information Systems & Telecommunication Co., Ltd.
	(In thousands)	
Ownership ratio (*)	38.36%	0.65%
Non-controlling interests	$ 110,007	$ 385
Net income attributable to non-controlling interests	6,321	23
Dividend paid to non-controlling interests	(525)	(2)

(*) Ownership of non-controlling interest is not included, whether directly or indirectly, in the ownership of the Group. It may differ from percentage of shares that is deducted by simply adding up each subsidiary's share.

13. INVESTMENTS IN ASSOCIATES:

(1) Investments in associates as of December 31, 2018, and 2017, consist of the following:

2018

Description	Principal business	Location	Ownership	Korean won			
				Acquisition cost		Book value	
			(%)	(In millions)			
EIGHT CITY Co., Ltd. (*1)	Real estate	Korea	-	₩	-	₩	-
Hanjin Int'l Japan Co., Ltd. (*2)	Airport support services	Japan	50.00		4,266		6,759
				₩	4,266	₩	6,759

Description	Principal business	Location	Ownership	Translation into U.S. dollars (Note 2)			
				Acquisition Cost		Book value	
			(%)	(In thousands)			
EIGHT CITY Co., Ltd. (*1)	Real estate	Korea	-	$	-	$	-
Hanjin Int'l Japan Co., Ltd. (*2)	Airport support services	Japan	50.00		3,815		6,045
				$	3,815	$	6,045

2017

Description	Principal business	Location	Ownership	Korean won			
				Acquisition cost		Book value	
			(%)	(In millions)			
EIGHT CITY Co., Ltd. (*1)	Real estate	Korea	23.81	₩	1,500	₩	-
Hanjin Int'l Japan Co., Ltd. (*2)	Airport support services	Japan	50.00		4,266		5,836
				₩	5,766	₩	5,836

Description	Principal business	Location	Ownership	Translation into U.S. dollars (Note 2)			
				Acquisition cost		Book value	
			(%)	(In thousands)			
EIGHT CITY Co., Ltd. (*1)	Real estate	Korea	23.81	$	1,342	$	-
Hanjin Int'l Japan Co., Ltd. (*2)	Airport support services	Japan	50.00		3,815		5,219
				$	5,157	$	5,219

(*1) With respect to EIGHT CITY Co., Ltd., investments in associates have been reclassified as financial assets at FVTOCI because the Group has lost significant influence as of December 31, 2018, and investments in EIGHT CITY Co., Ltd. were fully impaired prior to 2017.

(*2) With respect to Hanjin Int'l Japan Co., Ltd., investments in subsidiaries have been reclassified as investments in associates because the Group's ownership ratio became less than 50%, resulting in losing controls as of December 31, 2017.

(2) Changes in investments in associates for the year ended December 31, 2018 and 2017, are as follows:

2018

	Korean won					
	Beginning balance	Acquisition	Gain on valuation of equity method	Net change in interests of equity method	Others	Ending balance
	(In millions)					
EIGHT CITY Co., Ltd.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Hanjin Int'l Japan Co.,, Ltd.	5,836	-	520	403	-	6,759
	₩ 5,836	₩ -	₩ 520	₩ 403	₩ -	₩ 6,759

	Translation into U.S. dollars (Note 2)					
	Beginning balance	Acquisition	Gain on valuation of equity method	Net change in interests of equity method	Others	Ending balance
	(In thousands)					
EIGHT CITY Co., Ltd.	$ -	$ -	$ -	$ -	$ -	$ -
Hanjin Int'l Japan Co.,, Ltd.	5,219	-	465	361	-	6,045
	$ 5,219	$ -	$ 465	$ 361	$ -	$ 6,045

2017

	Korean won					
	Beginning balance	Acquisition	Gain on valuation of equity method	Net change in interests of equity method	Others(*)	Ending balance
	(In millions)					
EIGHT CITY Co., Ltd.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Hanjin Int'l Japan Co.,, Ltd.	-	-	(239)	(957)	7,032	5,836
Czech Airlines j.s.c.	24,387	-	11,558	2,466	(38,411)	-
	₩ 24,387	₩ -	₩ 11,319	₩ 1,509	₩ (31,379)	₩ 5,836

	Translation into U.S. dollars (Note 2)					
	Beginning balance	Acquisition	Gain on valuation of equity method	Net change in interests of equity method	Others(*)	Ending balance
	(In thousands)					
EIGHT CITY Co., Ltd.	$ -	$ -	$ -	$ -	$ -	$ -
Hanjin Int'l Japan Co.,, Ltd.	-	-	(214)	(856)	6,289	5,219
Czech Airlines j.s.c.	21,811	-	10,337	2,206	(34,354)	-
	$ 21,811	$ -	$ 10,123	$ 1,350	$ (28,065)	$ 5,219

(*) Other increase or decrease was mainly due to change in scope of consolidation.

(3) Financial information of the Group's investments in associates as of December 31, 2018, is as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	Hanjin Int'l Japan Co., Ltd.		Hanjin Int'l Japan Co., Ltd.	
	(In millions)		(In thousands)	
Current assets	₩	17,196	$	15,380
Non-current assets		186		166
		17,382		15,546
Current liabilities		3,865		3,456
Non-current liabilities		-		-
		3,865		3,456
Total shareholders' equity	₩	13,517	$	12,090
Sales	₩	29,496	$	26,381
Operating income		1,591		1,423

(4) Adjustments from equity of associates to book value of shares owned as of December 31, 2018, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	Hanjin Int'l Japan Co., Ltd.		Hanjin Int'l Japan Co., Ltd.	
	(In millions)		(In thousands)	
Net assets (A)	₩	13,517	$	12,090
Ownership ratio (B)		50.00%		50.00%
(A)×(B)		6,759		6,045
Investment difference and others		-		-
Book value	₩	6,759	$	6,045

14. INTERESTS IN JOINT OPERATIONS:

(1) The Group owns a joint investment building, which has the significant joint arrangement. Under the joint arrangement, the Group has 70% ownership of the building, INHA International Medical Center, which is located at Jung-gu, Incheon. The Group recognized income and expenses in relation to its share.

(2) From May 1, 2018, the Group has been cooperating with Delta Airlines on joint ventures on the Pacific route. The two companies have joint marketing/sales activities on the Pacific route and share their financial results.

15. PROPERTY, AIRCRAFT AND EQUIPMENT:

(1) Details of property, aircraft and equipment as of December 31, 2018 and 2017, are as follows:

2018

	Korean won			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
	(In millions)			
Land(*)	₩ 2,478,366	₩ -	₩ -	₩ 2,478,366
Leased land(*)	25,668	-	-	25,668
Buildings	1,992,041	(415,665)	-	1,576,376
Structures	204,503	(106,998)	-	97,505
Machinery	406,421	(308,304)	-	98,117
Aircraft	6,157,912	(3,665,550)	-	2,492,362
Engines	2,912,254	(1,396,994)	-	1,515,260
Leased aircraft	11,305,592	(3,151,197)	-	8,154,395
Leased engines	3,000,696	(1,155,560)	-	1,845,136
Aircraft parts	349,326	(162,853)	-	186,473
Others	705,482	(466,670)	-	238,812
Construction in progress	939,532	-	-	939,532
	₩ 30,477,793	₩ (10,829,791)	₩ -	₩ 19,648,002

	Translation into U.S. dollars (Note 2)			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
	(In thousands)			
Land(*)	$ 2,216,587	$ -	$ -	$ 2,216,587
Leased land(*)	22,956	-	-	22,956
Buildings	1,781,631	(371,760)	-	1,409,871
Structures	182,902	(95,696)	-	87,206
Machinery	363,493	(275,739)	-	87,754
Aircraft	5,507,478	(3,278,373)	-	2,229,105
Engines	2,604,645	(1,249,435)	-	1,355,210
Leased aircraft	10,111,432	(2,818,350)	-	7,293,082
Leased engines	2,683,747	(1,033,504)	-	1,650,243
Aircraft parts	312,427	(145,651)	-	166,776
Others	630,965	(417,379)	-	213,586
Construction in progress	840,294	-	-	840,294
	$ 27,258,557	$ (9,685,887)	$ -	$ 17,572,670

2017

	Korean won			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
	(In millions)			
Land(*)	₩ 2,487,667	₩ -	₩ -	₩ 2,487,667
Leased land(*)	25,668	-	-	25,668
Buildings	1,934,370	(363,452)	-	1,570,918
Structures	200,624	(99,023)	-	101,601
Machinery	373,545	(297,272)	-	76,273
Aircraft	5,646,707	(3,604,684)	(12,623)	2,029,400
Engines	1,893,913	(1,055,355)	-	838,558
Leased aircraft	10,765,439	(2,775,668)	-	7,989,771
Leased engines	3,453,047	(1,262,716)	-	2,190,331
Aircraft parts	312,542	(147,958)	-	164,584
Others	670,028	(428,679)	-	241,349
Construction in progress	1,191,174	-	-	1,191,174
	₩ 28,954,724	₩ (10,034,807)	₩ (12,623)	₩ 18,907,294

	Translation into U.S. dollars (Note 2)			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
	(In thousands)			
Land(*)	$ 2,224,906	$ -	$ -	$ 2,224,906
Leased land(*)	22,956	-	-	22,956
Buildings	1,730,050	(325,062)	-	1,404,988
Structures	179,433	(88,564)	-	90,869
Machinery	334,089	(265,873)	-	68,216
Aircraft	5,050,271	(3,223,937)	(11,291)	1,815,043
Engines	1,693,867	(943,882)	-	749,985
Leased aircraft	9,628,332	(2,482,486)	-	7,145,846
Leased engines	3,088,317	(1,129,341)	-	1,958,976
Aircraft parts	279,529	(132,330)	-	147,199
Others	599,257	(383,399)	-	215,858
Construction in Progress	1,065,357	-	-	1,065,357
	$ 25,896,364	$ (8,974,874)	$ (11,291)	$ 16,910,199

(*)The Group recognized accumulated revaluation surplus of ₩769,386 million ($688,120 thousand) prior to the year ended December 31, 2017.

(2) Changes in property, aircraft and equipment for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*)	Ending balance
	(In millions)					
Land	₩ 2,487,667	₩ 122	₩ -	₩ -	₩ (9,423)	₩ 2,478,366
Leased land	25,668	-	-	-	-	25,668
Buildings	1,570,918	14,078	-	(47,035)	38,415	1,576,376
Structures	101,601	3,223	-	(8,548)	1,229	97,505
Machinery	76,273	646	(3)	(12,508)	33,709	98,117
Aircraft	2,029,400	4,975	(51,165)	(200,243)	709,395	2,492,362
Engines	838,558	75,848	(27,288)	(246,738)	874,880	1,515,260
Leased aircraft	7,989,771	15,910	-	(685,796)	834,510	8,154,395
Leased engines	2,190,331	5,039	-	(428,271)	78,037	1,845,136
Aircraft parts	164,584	49,041	(9,586)	(17,566)	-	186,473
Others	241,349	34,058	(2,508)	(54,518)	20,431	238,812
Construction in progress	1,191,174	2,132,064	-	-	(2,383,706)	939,532
	₩ 18,907,294	₩ 2,335,004	₩ (90,550)	₩ (1,701,223)	₩ 197,477	₩ 19,648,002

	Translation into U.S. dollars (Note 2)					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*)	Ending balance
	(In thousands)					
Land	$ 2,224,906	$ 109	$ -	$ -	$ (8,428)	$ 2,216,587
Leased land	22,956	-	-	-	-	22,956
Buildings	1,404,988	12,591	-	(42,067)	34,358	1,409,870
Structures	90,869	2,882	-	(7,645)	1,100	87,206
Machinery	68,216	578	(2)	(11,187)	30,148	87,753
Aircraft	1,815,043	4,450	(45,760)	(179,093)	634,465	2,229,105
Engines	749,985	67,837	(24,407)	(220,675)	782,470	1,355,210
Leased aircraft	7,145,846	14,230	-	(613,359)	746,365	7,293,082
Leased engines	1,958,976	4,506	-	(383,034)	69,795	1,650,243
Aircraft parts	147,199	43,861	(8,573)	(15,711)	-	166,776
Others	215,858	30,461	(2,243)	(48,759)	18,271	213,588
Construction in progress	1,065,357	1,906,863	-	-	(2,131,926)	840,294
	$ 16,910,199	$ 2,088,368	$ (80,985)	$ (1,521,530)	$ 176,618	$ 17,572,670

(*) Other increase or decrease was mainly due to the transfer of construction in progress and consisted of the transfer of property, aircraft, equipment and investment properties; the transfer of assets held for sale; impairment loss; and others.

2017

	Korean won					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*)	Ending balance
	(In millions)					
Land	₩ 1,975,292	₩ 124,211	₩ (106)	₩ -	₩ 388,270	₩ 2,487,667
Leased land	21,460	-	-	-	4,208	25,668
Buildings	535,986	491	-	(39,718)	1,074,159	1,570,918
Structures	74,184	19,671	-	(4,985)	12,731	101,601
Machinery	82,083	6,577	(115)	(12,272)	-	76,273
Aircraft	1,763,460	5,608	(156,285)	(218,967)	635,584	2,029,400
Engines	715,637	32,582	(32,426)	(216,776)	339,541	838,558
Leased aircraft	8,130,925	295,707	(86,795)	(682,808)	332,742	7,989,771
Leased engines	2,202,542	79,871	(35,841)	(409,689)	353,448	2,190,331
Aircraft parts	125,749	64,628	(2,772)	(15,619)	(7,402)	164,584
Others	153,463	33,786	(5,643)	(43,630)	103,373	241,349
Construction in progress	2,092,501	2,420,448	(136,682)	-	(3,185,093)	1,191,174
	₩ 17,873,282	₩ 3,083,580	₩ (456,665)	₩ (1,644,464)	₩ 51,561	₩ 18,907,294

	Translation into U.S. dollars (Note 2)					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*)	Ending balance
	(In thousands)					
Land	$ 1,766,650	$ 111,092	$ (95)	$ -	$ 347,259	$ 2,224,906
Leased land	19,194	-	-	-	3,762	22,956
Buildings	479,372	440	-	(35,523)	960,699	1,404,988
Structures	66,348	17,593	-	(4,458)	11,386	90,869
Machinery	73,413	5,882	(103)	(10,976)	-	68,216
Aircraft	1,577,194	5,015	(139,777)	(195,839)	568,450	1,815,043
Engines	640,048	29,140	(29,001)	(193,879)	303,677	749,985
Leased aircraft	7,272,091	264,473	(77,628)	(610,686)	297,596	7,145,846
Leased engines	1,969,897	71,434	(32,054)	(366,416)	316,115	1,958,976
Aircraft parts	112,466	57,801	(2,479)	(13,969)	(6,620)	147,199
Others	137,254	30,217	(5,047)	(39,021)	92,455	215,858
Construction in progress	1,871,478	2,164,787	(122,245)	-	(2,848,663)	1,065,357
	$ 15,985,405	$ 2,757,874	$ (408,429)	$ (1,470,767)	$ 46,116	$ 16,910,199

(*) Other increase or decrease was mainly due to the transfer of construction in progress and consisted of the revaluation property, aircraft and equipment; the transfer of property, aircraft and equipment to investment properties; the transfer of assets held for sale; impairment loss on property, aircraft and equipment; and others.

(3) The Group capitalized borrowing costs of ₩16,104 million ($14,403 thousand) into construction in progress for the year ended December 31, 2018. The specific borrowing interest rate and general borrowing interest rate used to calculate borrowing costs are 3.60% and 3.87%, respectively.

(4) The Group has been applying asset revaluation model to land, and as of December 31, 2017, the Group revaluated land using the value appraised by an independent and professional appraiser, Hana Appraisal & Consulting Co., Ltd. Land was revaluated based on the land basis method, which uses price of land nearby and similar to utility value and further applies the effect of land price change rate from the date of public land value announcement, producer price index, location, shape, environment, usage and other factors. The book value of land using the revaluation model and the cost model as of December 31, 2018, is as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	Revaluation model	Cost model	Revaluation model	Cost model
	(In millions)		(In thousands)	
Land	₩ 2,478,366	₩ 1,721,262	$ 2,216,587	$ 1,539,453
Leased land	25,668	13,385	22,956	11,971
	₩ 2,504,034	₩ 1,734,647	$ 2,239,543	$ 1,551,424

The Group recognized revaluation surplus of ₩849,679 million ($759,931 thousand before income tax) and recognized accumulated revaluation loss of ₩80,952 million ($72,401 thousand) for the year ended December 31, 2018.

(5) Fair value measurements of land and leased land by fair value hierarchy levels as of December 31, 2018, are as follows:

	Korean won			
	Level 1	Level 2	Level 3	Total
	(In millions)			
Land	₩ -	₩ -	₩ 2,478,366	₩ 2,478,366
Leased land	-	-	25,668	25,668
	₩ -	₩ -	₩ 2,504,034	₩ 2,504,034

	Translation into U.S. dollars (Note 2)			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Land	$ -	$ -	$ 2,216,587	$ 2,216,587
Leased land	-	-	22,956	22,956
	$ -	$ -	$ 2,239,543	$ 2,239,543

(6) There was no movement between Level 1 and Level 2 for the year ended December 31, 2018.

16. PLEDGED ASSETS AND GUARANTEES (NON-FINANCIAL ASSETS):

(1) Significant pledged assets provided as collateral and guarantees for the Group as of December 31, 2018, is as follows (in millions of Korean won, except for share data):

Pledged assets	Book value	Collateralized amount(*4)/shares	Provided to	In relation to
Land and buildings (*1)	₩ 3,833,496	2,690,967	Korea Development Bank ("KDB") and others	Short-term and long-term borrowings, etc.
Aircraft and engines (*2)	2,918,009	3,411,166		
Facility usage rights, etc.	57,032	157,569		
Investment in subsidiaries — Hanjin Int'l Corp. (*3)	-	91,440,000 shares	Morgan Stanley Senior Funding, Inc. and others	
	₩ 6,808,537			

(*1) The land and buildings provided as collateral consist of property, aircraft and equipment and investment properties.
(*2) The aircraft and engines provided as collateral are composed of property, aircraft and equipment and finance lease receivables.
(*3) Investments in subsidiaries (Hanjin Int'l Corp.) provided as collateral are part of the Group and, therefore, carry no book value in the consolidated financial statements.
(*4) The collateralized amounts of the pledged assets provided as collateral and guarantees in foreign currency are translated into Korean won at the exchange rate on December 31, 2018.

(2) The Group has provided leased aircraft, leased engines and leased land as collateral to the lessor for the obligations under finance leases.

17. INVESTMENT PROPERTIES:

(1) Changes in the carrying amount of investment properties for years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won				
	Beginning balance	Acquisition	Depreciation	Others (*)	Ending balance
			(In millions)		
Land	₩ 54,452	₩ -	₩ -	₩ 2,566	₩ 57,018
Buildings	267,893	-	(11,071)	16,220	273,042
	₩ 322,345	₩ -	₩ (11,071)	₩ 18,786	₩ 330,060

	Translation into U.S. dollars (Note 2)				
	Beginning balance	Acquisition	Depreciation	Others (*)	Ending balance
			(In thousands)		
Land	$ 48,701	$ -	$ -	$ 2,295	$ 50,996
Buildings	239,596	-	(9,902)	14,507	244,201
	$ 288,297	$ -	$ (9,902)	$ 16,802	$ 295,197

(*) Other increase or decrease was due to the transfer of property, aircraft; equipment to investment property and foreign exchange fluctuation effect of overseas material assets.

2017

	Korean won				
	Beginning balance	Acquisition	Depreciation	Others (*)	Ending balance
			(In millions)		
Land	₩ 64,981	₩ -	₩ -	₩ (10,529)	₩ 54,452
Buildings	16,520	-	(4,919)	256,292	267,893
Construction in progress	243,380	45,155	-	(288,535)	-
	₩ 324,881	₩ 45,155	₩ (4,919)	₩ (42,772)	₩ 322,345

	Translation into U.S. dollars (Note 2)				
	Beginning balance	Acquisition	Depreciation	Others (*)	Ending balance
			(In thousands)		
Land	$ 58,118	$ -	$ -	$ (9,417)	$ 48,701
Buildings	14,775	-	(4,399)	229,220	239,596
Construction in progress	217,672	40,385	-	(258,057)	-
	$ 290,565	$ 40,385	$ (4,399)	$ (38,254)	$ 288,297

(*) Other increase or decrease was due to the transfer of property, aircraft and equipment to investment properties and exchange rate fluctuations.

(2) Revenue related to investment properties was ₩9,581 million ($8,569 thousand) and ₩2,983 million ($2,668 thousand) for the years ended December 31, 2018 and 2017, respectively.

(3) Fair values of investment properties as of December 31, 2018, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	Book	Fair value	Book	Fair value
	(In millions)		(In thousands)	
Land	₩ 57,018	₩ 97,434	$ 50,996	$ 87,143
Buildings	273,042	311,539	244,201	278,632
	₩ 330,060	₩ 408,973	$ 295,197	$ 365,775

As of December 31, 2017, the Group appraised land by an independent and professional appraiser, Hana Appraisal & Consulting Co., Ltd. The revaluation method is appraised using value of land basis method, which uses standard land price that is near by the land similar to utility value considering the ratio of changing land price, the ratio of increasing Producer Price Index, location, shape, environment, state of usage of land and other factors of valuation from the date of public announcement of land value.

(4) Fair value measurements of investment properties by fair value hierarchy levels as of December 31, 2018, is as follows:

	Korean won (In millions)			
	Level 1	Level 2	Level 3	Total
Land	₩ -	₩ -	₩ 97,434	₩ 97,434
Buildings	-	-	311,539	311,539
	₩ -	₩ -	₩ 408,973	₩ 408,973

	Translation into U.S. dollars (Note 2) (In thousands)			
	Level 1	Level 2	Level 3	Total
Land	$ -	$ -	$ 87,143	$ 87,143
Buildings	-	-	278,632	278,632
	$ -	$ -	$ 365,775	$ 365,775

18. INTANGIBLE ASSETS:

Changes in the carrying amount of intangible assets for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won						
	Beginning balance	Acquisition	Disposal	Amortization	Impairment loss	Others (*)	Ending balance
				(In millions)			
Goodwill	₩ 17,517	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 17,517
Facility usage rights	74,374	-	-	(10,042)	-	-	64,332
Research and development costs	34,681	-	-	(1,476)	-	(33,205)	-
Other intangibles	236,924	599	(745)	(17,865)	-	-	218,913
	₩ 363,496	₩ 599	₩ (745)	₩ (29,383)	₩ -	₩ (33,205)	₩ 300,762

	Translation into U.S. dollars (Note 2)						
	Beginning balance	Acquisition	Disposal	Amortization	Impairment loss	Others (*)	Ending balance
				(In thousands)			
Goodwill	$ 15,665	$ -	$ -	$ -	$ -	$ -	$ 15,665
Facility usage rights	66,519	-	-	(8,981)	-	-	57,538
Research and development costs	31,018	-	-	(1,320)	-	(29,698)	-
Other intangibles	211,900	535	(666)	(15,978)	-	-	195,791
	$ 325,102	$ 535	$ (666)	$ (26,279)	$ -	$ (29,698)	$ 268,994

(*) Other increase or decrease was mainly due to the transfer of research and development costs prepaid expenses and ordinary development expenses.

2017

	Korean won						
	Beginning balance	Acquisition	Disposal	Amortization	Impairment loss	Others (*)	Ending balance
				(In millions)			
Goodwill	₩ 17,516	₩ -	₩ -	₩ -	₩ (97)	₩ 98	₩ 17,517
Facility usage rights	84,416	-	-	(10,042)	-	-	74,374
Research and development costs	48,312	2,936	-	(16,567)	-	-	34,681
Other intangibles	254,786	851	(112)	(18,576)	(6)	(19)	236,924
	₩ 405,030	₩ 3,787	₩ (112)	₩ (45,185)	₩ (103)	₩ 79	₩ 363,496

	Translation into U.S. dollars (Note 2)						
	Beginning balance	Acquisition	Disposal	Amortization	Impairment loss	Others (*)	Ending balance
				(In thousands)			
Goodwill	$ 15,665	$ -	$ -	$ -	$ (87)	$ 87	$ 15,665
Facility usage rights	75,500	-	-	(8,981)	-	-	66,519
Research and development costs	43,210	2,625	-	(14,817)	-	-	31,018
Other intangibles	227,874	762	(100)	(16,614)	(5)	(17)	211,900
	$ 362,249	$ 3,387	$ (100)	$ (40,412)	$ (92)	$ 70	$ 325,102

(*) Other increase or decrease was mainly due to business combination and the transfer of construction in progress.

19. OTHER ASSETS:

Other assets as of December 31, 2018 and 2017, are as follows:

	Korean won							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In millions)							
Advance payments	₩	90,067	₩	58	₩	323,731	₩	58
Prepaid expenses		65,234		99,532		112,036		197,698
Others		19,943		3,377		26,551		3,157
	₩	175,244	₩	102,967	₩	462,318	₩	200,913

	Translation into U.S. dollars (Note 2)							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In thousands)							
Advance payments	$	80,553	$	52	$	289,537	$	52
Prepaid expenses		58,344		89,019		100,202		176,816
Others		17,837		3,020		23,747		2,823
	$	156,734	$	92,091	$	413,486	$	179,691

20. TRADE AND OTHER PAYABLES:

Trade and other payables as of December 31, 2018 and 2017, are as follows:

	Korean won							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In millions)							
Trade payables	₩	153,624	₩	-	₩	151,797	₩	-
Non-trade payables		135,221		3,906		128,749		5,250
Accrued expenses		657,906		17,417		637,421		16,417
Dividends payable		1,055		-		3		-
	₩	947,806	₩	21,323	₩	917,970	₩	21,667

	Translation into U.S. dollars (Note 2)							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In thousands)							
Trade payables	$	137,398	$	-	$	135,763	$	-
Non-trade payables		120,938		3,493		115,150		4,695
Accrued expenses		588,414		15,577		570,093		14,683
Dividends payable		943		-		3		-
	$	847,693	$	19,070	$	821,009	$	19,378

21. BORROWINGS AND DEBENTURES:

(1) Short-term borrowings as of December 31, 2018, and 2017, consist of the following:

	Lender	Annual interest rate	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
			(In millions)		(In thousands)	
Local currency short-term borrowings	NongHyup Bank	-	₩ -	₩ 108,000	$ -	$ 96,592
		-	-	91,500	-	81,835
		3M MOR + 1.67%	90,000	-	80,494	-
	KDB	-	-	70,000	-	62,606
		3.58%	70,000	-	62,606	-
	IVY 1st Co., Ltd and others	3.38%	60,000	60,000	53,662	53,664
			220,000	329,500	196,762	294,697
Foreign currency short-term borrowings	KDB	3M LIBOR + 1.93%–2.20%	172,187	152,237	154,000	136,157
	KDB (Singapore branch)	-	-	26,785	-	23,956
	The Export-Import Bank of Korea	3M LIBOR + 2.80%	55,905	38,453	50,000	34,392
	Hana Bank and others	3M JPY LIBOR + 2.38%	60,791	225,650	54,370	201,814
		3M LIBOR + 2.10%–2.90%	223,428	-	199,828	-
			512,311	443,125	458,198	396,319
			₩ 732,311	₩ 772,625	$ 654,960	$ 691,016

(2) Long-term borrowings as of December 31, 2018, and 2017, consist of the following:

	Lender	Annual interest rate	Maturity	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
				(In millions)		(In thousands)	
Local currency long-term borrowings	KDB	3.35%–4.43%	2026-03-28	₩ 536,180	₩ 417,747	$ 479,546	$ 373,622
	Korea Resource Corporation	2.60%	2020-12-15	127	253	113	227
	Kookmin Bank and others	2.50%–5.45%	2028-07-25	687,440	230,032	614,829	205,734
				1,223,747	648,032	1,094,488	579,583
Foreign currency long-term borrowings	KDB	3M LIBOR + 1.92%–2.70%	2025-09-30	378,896	450,264	338,875	402,705
		-	-	-	14,237	-	12,733
		3M EURIBOR + 1.90%	2020-02-27	115,124	-	102,964	-
		1.79%	2019-09-26	115,124	243,058	102,964	217,384
	KDB (Singapore branch)	3M LIBOR + 2.50%	2021-02-23	20,126	-	18,000	-
	The Export-Import Bank of Korea	3M LIBOR + 2.51%	2024-06-27	102,305	115,856	91,499	103,618
	Bank of Communications	3M LIBOR + 2.70%	2023-08-28	143,549	166,512	128,387	148,924
	Morgan Stanley Senior Funding, Inc. and others	3M LIBOR + 2.50%	2020-10-18	670,860	642,840	600,000	574,940
	Hana Bank and others	3M LIBOR + 1.70%–3.75%	2021-11-28	357,534	59,722	319,769	53,414
		3M JPY LIBOR + 1.30%	2020-12-22	44,397	62,385	39,708	55,795
		2.32%	2022-04-27	47,532	-	42,511	-
				1,995,447	1,754,874	1,784,677	1,569,513
				3,219,194	2,402,906	2,879,165	2,149,096
	Less: current portion of long-term borrowings			(845,561)	(460,991)	(756,248)	(412,297)
				₩ 2,373,633	₩ 1,941,915	$ 2,122,917	$ 1,736,799

(3) Debentures as of December 31, 2018, and 2017, consist of the following:

Series	Issue date	Maturity	Annual interest rate	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
				(In millions)		(In thousands)	
47-2nd	2012-10-08	2019-10-08	4.16%	₩ 250,000	₩ 250,000	$ 223,594	$ 223,594
49-3rd	2012-12-13	2019-12-13	4.36%	170,000	170,000	152,044	152,044
58th	2015-02-27	2018-02-27	-	-	94,911	-	84,886
59th	2015-08-31	2018-08-31	-	-	200,000	-	178,875
60th	2016-02-17	2018-02-17	-	-	150,000	-	134,156
62nd	2016-04-12	2018-04-12	-	-	250,000	-	223,594
63-2nd	2016-03-21	2018-03-21	-	-	32,142	-	28,747
63-3rd (*1)	2016-03-21	2019-03-21	3M LIBOR + 1.20%	44,724	42,856	40,000	38,329
67th	2016-10-07	2018-04-07	-	-	50,000	-	44,719
69th (*2)	2017-02-27	2020-02-27	3M JPY LIBOR + 4.10%	32,295	48,405	28,884	43,292
70th	2017-04-20	2018-04-20	-	-	70,000	-	62,606
71st	2017-10-18	2019-04-18	4.19%	160,000	160,000	143,100	143,100
72nd (*1)	2017-10-26	2020-10-26	3M LIBOR + 0.95%	33,543	32,142	30,000	28,747
73rd	2017-10-30	2019-04-30	4.19%	40,000	40,000	35,775	35,775
74th	2017-11-27	2019-05-27	4.19%	40,000	40,000	35,775	35,775
75th	2017-12-11	2019-06-11	4.19%	30,000	30,000	26,830	26,830
76-1st (*2)	2018-02-27	2021-02-27	3M JPY LIBOR + 3.30%	40,527	-	36,246	-
76-2nd (*2)	2018-02-27	2021-02-27	3M JPY LIBOR + 2.80%	60,791	-	54,370	-
77th	2018-03-06	2021-03-06	5.88%	335,430	-	300,000	-
78th	2018-04-11	2020-04-11	4.05%	240,000	-	214,650	-
80th (*1)	2018-06-28	2021-06-28	3M LIBOR + 0.95%	33,543	-	30,000	-
81-1st	2018-08-06	2020-08-06	3.79%	185,000	-	165,459	-
81-2nd	2018-08-06	2021-08-06	4.57%	115,000	-	102,853	-
82-1st	2018-11-23	2020-11-23	3.74%	70,000		62,606	
82-2nd	2018-11-23	2021-11-23	4.22%	100,000		89,437	
Kexim (*3)	2017-09-28	2020-09-28	3M LIBOR + 0.95%	335,430	321,420	300,000	287,470
				2,316,283	1,981,876	2,071,623	1,772,539
Present value of discounts				(14,574)	(14,383)	(13,034)	(12,864)
				2,301,709	1,967,493	2,058,589	1,759,675
Less: short-term debentures				-	(70,000)	-	(62,606)
Present value of discounts				-	76	-	68
Less: current portion of debentures				(783,357)	(795,205)	(700,614)	(711,211)
Present value of discounts, less current portion				607	625	543	559
				₩ 1,518,959	₩ 1,102,989	$ 1,358,518	$ 986,485

(*1) Shinhan Bank has provided guarantee at a maximum of $100,000 thousand for 63-3rd, 72nd, and 80th guaranteed debentures.

(*2) Kookmin Bank has provided guarantee at a maximum of JPY 5,546,142 thousand for 69th, JPY 4,140,000 thousand for 76-1st and JPY 6,180,000 thousand for 76-2nd guaranteed debentures.

(*3) The Export-Import Bank of Korea provides up to $300,000 thousand as payment guarantee associated with the debenture.

(4) ABS loans as of December 31, 2018, and 2017, consist of the following:

Description	Maturity	Annual interest rate	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
			(In millions)		(In thousands)	
KAL-9th ABS	2018-04-25	-	₩ -	₩ 60,000	$ -	$ 53,662
KAL-11th ABS	2019-02-14	5.11%	20,000	110,000	17,887	98,381
KAL-12th ABS	2019-05-07	4.74%	15,000	45,000	13,416	40,247
KAL-14th ABS	2018-08-27	-	-	23,119	-	20,677
KAL-16th ABS	2020-01-28	3.98%	160,000	320,000	143,100	286,200
KAL-17th ABS	2019-04-29	1M LIBOR + 3.00%	24,847	95,236	22,222	85,176
KAL-18th ABS	2020-06-01	3M HIBOR + 3.74%	40,201	63,970	35,955	57,213
KAL-19th ABS	2021-07-11	4.24%	555,000	835,000	496,378	746,803
KAL-20th ABS	2019-12-27	2.01%	53,077	98,561	47,471	88,150
KAL-20Ath ABS	2019-12-27	2.01%	41,101	76,305	36,761	68,246
KAL-21st ABS	2022-04-07	4.63%	360,000	400,000	321,975	357,750
KAL-22nd ABS	2023-01-26	4.36%	350,000	-	313,031	-
KAL-23rd ABS	2021-10-27	3.95%	380,154	-	340,000	-
			1,999,380	2,127,191	1,788,196	1,902,505
Less: current portion of ABS loans			(794,998)	(866,562)	(711,027)	(775,031)
			₩ 1,204,382	₩ 1,260,629	$ 1,077,169	$ 1,127,474

The Group provides the guarantee deposit of ₩147,344 million ($131,781 thousand), JPY 2,372,269 thousand, $53,917 thousand and HKD 106,673 thousand in connection with the above ABS loans for the purpose of repayment guarantee (see Note 6).

Meanwhile, above ABS loans are the borrowings to repay in a way to trust, right to future sales receivable that will be held at the time of selling the airline ticket and in the financial institution. The subject receivables and the period are as follows:

Description	Receivable	Period
KAL-11th ABS	Domestic cargo indirect sales receivable	2014.02.06– Of the following conditions, until the earlier date (i) 2019.02.14 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-12th ABS	Domestic passenger card sales receivable (NongHyup card and Lotte card)	2014.04.24– Of the following conditions, until the earlier date (i) 2019.05.07 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-16th ABS	Domestic passenger card sales receivable (BC card)	2015.01.20– Of the following conditions, until the earlier date (i)2020.01.28 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-17th ABS	North America region cargo receivables (settlement of Cargo Accounts Settlement Systems ("CASS"))	2016.04.11–When the ABS loan's principal and interest have been redeemed in total
KAL-18th ABS	Hong Kong and Singapore passenger sales receivable	2016.06.01–When the ABS loan's principal and interest have been redeemed in total
KAL-19th ABS	Korea region passenger cash sales receivable	2016.07.11– Of the following conditions, until the earlier date (i)2021.07.11 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-20th ABS	Japan region passenger sales receivable	2016.12.29–Of the following conditions, until the earlier date (i) 2021.12.31 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-20Ath ABS	Japan region passenger sales receivable	2017.05.31–Of the following conditions, until the earlier date (i) 2021.12.31 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-21st ABS	Domestic passenger card sales receivable (Samsung card)	2017.03.30–Of the following conditions, until the earlier date (i) 2022.04.07 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-22nd ABS	Domestic passenger card sales receivable (Shinhan card)	2018.01.18–Of the following conditions, until the earlier date (i) 2023.01.26 (ii) When the ABS loan's principal and interest have been redeemed in total
KAL-23rd ABS	North America region passenger receivables (settlement of Billing and Settlement Plan("BSP"))	2018.10.30–Of the following conditions, until the earlier date (i) 2021.10.27 (ii) When the ABS loan's principal and interest have been redeemed in total

22. FINANCE LEASE OBLIGATIONS:

(1) Finance lease obligations as of December 31, 2018, and 2017, consist of the following:

Lender	Annual interest rate	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
		(In millions)		(In thousands)	
Celestial Aviation Trading 21 Limited	2.69%	₩ 158,648	₩ 165,476	$ 141,891	$ 147,997
ECA-2014A Ltd.	3M LIBOR + 0.96%	200,553	219,142	179,369	195,995
ECA-2014B Ltd.	3M EURIBOR + 0.32% 3M LIBOR + 2.85%	156,602	180,052	140,060	161,034
ECA-2015A Ltd.	3M EURIBOR + 0.31% 3M LIBOR + 2.85% ~ 3.00%	198,050	224,807	177,131	201,061
ECA-2015B Ltd.	3M JPY LIBOR + 0.30% 3M LIBOR + 3.00%	109,486	116,245	97,922	103,966
EXPORT LEASING (2015) LLC	3M LIBOR + 0.40%	123,978	134,294	110,882	120,109
EXPORT LEASING (2015-A) LLC	3M LIBOR + 0.65% ~ 0.68%	298,259	323,120	266,756	288,990
EXPORT LEASING (2015-B) LLC	3M LIBOR + 0.67% ~ 0.69%	301,068	326,725	269,267	292,214
EXPORT LEASING (2015-C) LLC	3M LIBOR + 0.70%	153,814	166,725	137,567	149,114
KALECA11 AVIATION Ltd.	3M LIBOR + 0.85%	366,052	422,111	327,387	377,525
KALECA13 AVIATION Ltd.	3M EURIBOR + 0.63% 3M LIBOR + 2.55%	128,391	154,221	114,829	137,931
KE Export Leasing (2010) Ltd.	3M LIBOR + 0.30%	159,925	193,598	143,033	173,149
KE Export Leasing (2011) Ltd	3M LIBOR + 0.25%	199,965	229,706	178,843	205,443
KE Export Leasing (2011-II) Ltd	3M LIBOR + 0.26%	142,818	165,191	127,733	147,743
KE Export Leasing (2012) Ltd.	3M LIBOR + 1.05%	222,767	256,775	199,237	229,653
KE Export Leasing (2013-C)	3M LIBOR + 0.57% ~ 0.61%	102,515	114,818	91,687	102,690
KE Export Leasing (2013-D) LLC	3M LIBOR + 0.30% ~ 0.60%	231,335	252,966	206,900	226,246
KE Export Leasing 2014 LLC	3M LIBOR + 0.58%	127,657	139,275	114,173	124,564
KEXPORT LEASING 2015	3M LIBOR + 1.17% ~ 1.18%	242,993	271,347	217,326	242,686
SKY HIGH LIV	3M LIBOR + 2.20%	132,780	144,784	118,755	129,491
SKY HIGH LXX LEASING	3M LIBOR + 1.60% ~ 2.40%	307,639	329,471	275,144	294,670
Sky Leasing 2017-A	3M EURIBOR + 2.25% 3M LIBOR + 2.60%	127,022	150,528	113,605	134,628
Yian Limited	3M LIBOR + 2.04%	134,206	149,935	120,031	134,098
Export Leasing 2016-A	6M EURIBOR + 1.05%	156,522	174,038	139,990	155,655
Export Leasing 2016-B	3M TLIBOR + 2.40% 5.55%	148,019	158,380	132,384	141,651
Export Leasing 2016-C	3M LIBOR + 0.90%	118,536	128,730	106,016	115,133
EXPORT LEASING INS (2017-A) LLC	6M LIBOR + 1.25% ~ 2.60%	295,914	309,208	264,658	276,548
Ray Aviation Limited	3M LIBOR + 1.70% 5.20%	133,768	151,006	119,639	135,056
JAY LEASING 2017	3M LIBOR + 2.70% 2.45% ~ 2.68%	260,263	64,619	232,773	57,793
HONG KONG AIRCRAFT LEASING I COMPANY LIMITED	2.63%	131,327	136,772	117,456	122,325
PC2018 Limited	3M LIBOR + 1.95% 5.10%	170,749	-	152,714	-
EXPORT LEASING INS 2018 LLC	3M EURIBOR + 0.90% 5.10%	171,101	-	153,028	-
EXPORT LEASING SECA (2018) LIMITED	3M JPY LIBOR + 0.28%	321,465	-	287,510	-
	3M EURIBOR + 2.62%	-	-	-	-
KE DANOMIN AVIATION 2018	3M EURIBOR+1.30% ~ 2.18%	166,168	-	148,616	-
Cisco Systems Capital Korea	2.80%	2,311	-	2,067	-
RBS and others	2.32% ~ 9.57%	1,083,939	1,621,063	969,449	1,449,842
		7,486,605	7,575,128	6,695,828	6,775,000
Less: current portion of obligation under finance leases, net of present value of discounts		(1,165,558)	(1,178,332)	(1,042,446)	(1,053,870)
		₩ 6,321,047	₩ 6,396,796	$ 5,653,382	$ 5,721,130

The Export-Import Bank of the United States and others have provided payment guarantees of $3,750 million for above finance lease obligations as of December 31, 2018. Meanwhile, the Group has provided payment guarantees of $107 million to Industrial & Commercial Bank of China, the beneficiary of the finance lease obligations due to Yian Limited, and $138 million to Industrial & Commercial Bank of China, the beneficiary of the finance lease obligations due to PC2018 Limited, as of December 31, 2018.

(2) Minimum lease payments and present value of finance lease obligations as of December 31, 2018, consist of the following:

	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Less than one year	₩ 1,370,352	$ 1,225,607
One year to five years	4,610,385	4,123,410
More than five years	2,305,607	2,062,076
	8,286,344	7,411,093
Present value of discounts	(799,739)	(715,265)
	₩ 7,486,605	$ 6,695,828

23. EMPLOYEE BENEFITS:

(1) Net defined benefit liabilities as of December 31, 2018, and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Present value of defined benefit obligations	₩ 1,838,886	₩ 1,494,398	$ 1,644,652	$ 1,336,551
Fair value of plan assets	(344,899)	(349,859)	(308,468)	(312,905)
	₩ 1,493,987	₩ 1,144,539	$ 1,336,184	$ 1,023,646

(2) Changes in carrying amount of the net defined benefit liabilities for the year ended December 31, 2018 and 2017, are as follows:

2018

	Korean won			Translation into U.S. dollars (Note 2)		
	Present value of defined benefit obligations	Fair value of plan assets	Total	Present value of defined benefit obligations	Fair value of plan assets	Total
		(In millions)			(In thousands)	
Beginning balance	₩ 1,494,398	₩ (349,859)	₩ 1,144,539	$ 1,336,551	$ (312,905)	$ 1,023,646
Current service cost	130,284	-	130,284	116,523	-	116,523
Interest expense (income)	39,811	(9,140)	30,671	35,606	(8,174)	27,432
Remeasurement of the net defined benefit liabilities	298,280	4,833	303,113	266,774	4,322	271,096
Retirement benefits paid	(125,132)	34,274	(90,858)	(111,915)	30,654	(81,261)
Contributions	-	(25,143)	(25,143)	-	(22,488)	(22,488)
Succession of defined benefit obligations and others	1,281	-	1,281	1,145	-	1,145
Other increase(decrease)	(36)	136	100	(32)	123	91
Ending balance	₩ 1,838,886	₩ (344,899)	₩ 1,493,987	$ 1,644,652	$ (308,468)	$ 1,336,184

2017

	Korean won			Translation into U.S. dollars (Note 2)		
	Present value of defined benefit obligations	Fair value of plan assets	Total	Present value of defined benefit obligations	Fair value of plan assets	Total
		(In millions)			(In thousands)	
Beginning balance	₩ 1,477,734	₩ (351,402)	₩1,126,332	$ 1,321,648	$ (314,285)	$ 1,007,363
Current service cost	130,039	-	130,039	116,303	-	116,303
Interest expense (income)	33,461	(6,640)	26,821	29,927	(5,939)	23,988
Remeasurement of the net defined benefit liabilities	(11,897)	2,429	(9,468)	(10,640)	2,173	(8,467)
Retirement benefits paid	(135,653)	33,885	(101,768)	(121,325)	30,306	(91,019)
Contributions	-	(27,649)	(27,649)	-	(24,728)	(24,728)
Succession of defined benefit obligations	107	-	107	96	-	96
Other increase(decrease)	607	(482)	125	542	(432)	110
Ending balance	₩ 1,494,398	₩ (349,859)	₩1,144,539	$ 1,336,551	$ (312,905)	$ 1,023,646

(3) The principal assumptions used for actuarial valuation as of December 31, 2018 and 2017, are as follows:

	December 31, 2018	December 31, 2017
Discount rate (%)	2.12 ~ 2.28	2.63 ~ 2.79
Expected wage growth rate (%)	2.50 ~ 7.23	1.80 ~ 8.20

(4) The fair values of plan assets as of December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Bank deposits and others	₩ 197,865	₩ 184,945	$ 176,966	$ 165,410
Equity instruments	5,355	40,384	4,789	36,119
Debt instruments	121,456	102,895	108,628	92,027
Others	20,223	21,635	18,085	19,349
	₩ 344,899	₩ 349,859	$ 308,468	$ 312,905

Policy and investment strategy about plan assets pursue the balance between reducing risk and creating profit. Fundamentally, it is accomplished by diversified investment, partially matching strategy of assets and liabilities and hedging strategy to minimize flexibility of assets related to liabilities. The Group extensively diversifies investment to broadly based assets to reduce overall flexibility of assets related to liabilities (risk adjustment) and achieve a target profit. It is similar to bonds and partially responds to a long maturity pension liability to allocation of assets for earning static profit.

The actual returns of plan assets for the years ended December 31, 2018 and 2017, are ₩4,307 million ($3,852 thousand) and ₩4,211 million ($3,766 thousand), respectively.

(5) The sensitivity analyses below have been determined based on reasonably possible changes of the respective assumptions occurring as of December 31, 2018 and 2017, while holding all other assumptions constant.

2018

	Korean won		Translation into U.S. dollars (Note 2)	
	Increase by 1%	Decrease by 1%	Increase by 1%	Decrease by 1%
	(In millions)		(In thousands)	
Discount rate	₩ (149,478)	₩ 173,221	$ (133,689)	$ 141,748
Expected wage growth rate	170,246	(149,934)	152,263	(122,370)

2017

	Korean won		Translation into U.S. dollars (Note 2)	
	Increase by 1%	Decrease by 1%	Increase by 1%	Decrease by 1%
	(In millions)		(In thousands)	
Discount rate	₩ (111,333)	₩ 128,008	$ (99,573)	$ 114,487
Expected wage growth rate	127,946	(113,331)	114,432	(101,360)

Since there is correlation among actuarial assumptions, changes in assumptions will not occur in isolation, and above sensitivity analyses will not show the actual change of defined benefit obligations. Also, in the above sensitivity analyses, present value of defined benefit obligations is measured by using the projected unit credit method that is applied to measure the amount of defined benefit obligations in the consolidated statements of financial position.

(6) The Group expects to make a contribution of 158,860 million ($142,080 thousand) to the defined benefit plans for the year ended December 31, 2019. Meanwhile, the average duration of the defined benefit obligation as of December 31, 2018, is 8.93 years.

24. PROVISIONS:

Changes in the provision liabilities for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won				
	Beginning balance	Charged to income or loss	Utilization	Others	Ending balance
			(In millions)		
Current:					
Provision for construction loss (*1)	₩ -	₩ -	₩ (4,422)	₩ 4,422	₩ -
Liability for greenhouse gas emissions (*2)	5,462	770	(6,232)	-	-
Provision for leased aircraft maintenance (*3)	-	30,598	-	-	30,598
Provision for coupon for passenger flight tickets (*4)	-	-	(2,523)	9,073	6,550
	5,462	31,368	(13,177)	13,495	37,148
Non-current:					
Provision for leased aircraft maintenance (*3)	119,176	22,712	(1,103)	-	140,785
Provision for coupon for passenger flight tickets (*4)	11,090	-	(2,418)	(8,672)	-
Others (*6)	7,495	440	(74)	-	7,861
	137,761	23,152	(3,595)	(8,672)	148,646
	₩ 143,223	₩ 54,520	₩ (16,772)	₩ 4,823	₩ 185,794

	Translation into U.S. dollars (Note 2)				
	Beginning balance	Charged to income or loss	Utilization	Others	Ending balance
			(In thousands)		
Current:					
Provision for construction loss (*1)	$ -	$ -	$ (3,955)	$ 3,955	$ -
Liability for greenhouse gas emissions (*2)	4,885	688	(5,573)	-	-
Provision for leased aircraft maintenance (*3)	-	27,366	-	-	27,366
Provision for coupon for passenger flight tickets (*4)	-	-	(2,256)	8,114	5,858
	4,885	28,054	(11,784)	12,069	33,224
Non-current:					
Provision for leased aircraft maintenance (*3)	106,588	20,313	(986)	-	125,915
Provision for coupon for passenger flight tickets (*4)	9,918	-	(2,162)	(7,756)	-
Others (*6)	6,704	393	(66)	-	7,031
	123,210	20,706	(3,214)	(7,756)	132,946
	$ 128,095	$ 48,760	$ (14,998)	$ 4,313	$ 166,170

2017

	Korean won				
	Beginning balance	Charged to income or loss	Utilization	Others	Ending balance
			(In millions)		
Current:					
Provision for construction loss (*1)	₩ -	₩ 4,393	₩ (1,628)	₩ (2,765)	₩ -
Liability for greenhouse gas emissions (*2)	5,431	5,462	(1,161)	(4,270)	5,462
	5,431	9,855	(2,789)	(7,035)	5,462
Non-current:					
Provision for leased aircraft maintenance (*3)	141,631	45,773	(68,228)	-	119,176
Provision for coupon for passenger flight tickets (*4)	29,625	-	(16,059)	(2,476)	11,090
Provision for construction warranties (*5)	732	-	(732)	-	-
Others (*6)	6,686	864	(55)	-	7,495
	178,674	46,637	(85,074)	(2,476)	137,761
	₩ 184,105	₩ 56,492	₩ (87,863)	₩ (9,511)	₩ 143,223

	Translation into U.S. dollars (Note 2)				
	Beginning balance	Charged to income or loss	Utilization	Others	Ending balance
			(In thousands)		
Current:					
Provision for construction loss (*1)	$ -	$ 3,929	$ (1,456)	$ (2,473)	$ -
Liability for greenhouse gas emissions (*2)	4,858	4,885	(1,038)	(3,820)	4,885
	4,858	8,814	(2,494)	(6,293)	4,885
Non-current:					
Provision for leased aircraft maintenance (*3)	126,671	40,938	(61,022)	-	106,587
Provision for coupon for passenger flight tickets (*4)	26,495	-	(14,363)	(2,214)	9,918
Provision for construction warranties (*5)	654	-	(654)	-	-
Others (*6)	5,981	774	(50)	-	6,705
	159,801	41,712	(76,089)	(2,214)	123,210
	$ 164,659	$ 50,526	$ (78,583)	$ (8,507)	$ 128,095

(*1) The Group has recognized expected future construction loss of aerospace division as a provision for construction loss (see Note 44).

(*2) The Group has recognized the estimated cost of greenhouse gas emission expected to exceed the emission allowance for the year as liability for greenhouse gas emissions. In the the year ended December 31, 2018, the Group has completed the submission of the shortfall in the previous year to the government through purchase in the emission trading market.

(*3) The Group has maintenance obligations related to the operating leases. In order to fulfill the obligations, the Group has recognized a provision for leased aircraft maintenance by estimating future maintenance costs as it is probable that an outflow of resources embodying economic benefits will be required to settle the obligations (see Note 41).

(*4) The Group agreed to provide $26,000 thousand in flight ticket coupons to the plaintiff in relation to the U.S. Court class action on airline ticket price collusion of flights to Americas and has recognized ₩6,550 million ($5,858 thousand) as a provision for remaining passenger flight ticket coupons as of December 31, 2018 (see Note 43).

(*5) The Group has recognized provisions for the maintenance expenses expected to incur from aerospace division's sales, and the obligation had been settled for the year ended December 31, 2017.

(*6) The Group has recognized ₩7,795 million ($6,972 thousand) as a provision for the restoration of forest due to the production of limestone and is provided with performance guarantees by Seoul Guarantee Insurance Co., Ltd (see Note 43).

25. DEFERRED REVENUE (CUSTOMER LOYALTY PROGRAM):

The Group manages its frequent flyer program, "SKYPASS," a customer loyalty program that provides incentives through accrued mileage, such as bonus flight tickets and seat class upgrades, in addition to other benefits to customers of the Group and its alliance companies. The Group allocates the fair value of the consideration received in respect of the sales into the award credits and service revenue. The award credits' portion of sales price is not recognized as revenue until the obligation has been performed. The Group's deferred income in connection with the SKYPASS system recognized in the consolidated statement of financial position as of December 31, 2018, amounted to ₩2,278,701 million ($2,038,011 thousand), including ₩87,740 million ($78,472 thousand) of advance receipts from customers and ₩2,190,961 million($1,942,053 thousand including current portion amounts of ₩422,396 million ($377,780 thousand) of deferred revenue.

26. DERIVATIVE INSTRUMENTS:

(1) As of December 31, 2018, the Group entered into derivative agreements with KDB and ten other financial institutions, and derivatives as of December 31, 2018, are as follows:

Type of transaction	Accounting policy	Maturity	Contract amount	
Oil price option	Trading	2020.12.31	BBL	10,300 thousand
Interest rate swaps	Trading	2019.09.26	EUR	90,000 thousand
Cross-currency	Trading	2023.06.12	JPY	56,379,053 thousand
interest	Trading	2020.12.11	EUR	266,904 thousand
rate swaps	Trading	2027.11.17	KRW	1,127,245 million

(2) Impact on the consolidated financial statements in relation to derivatives for the year ended December 31, 2018, is as follows:

	Korean won					
	Consolidated statement of financial position		Consolidated statement of comprehensive income (loss)			
Derivative instruments	Financial derivative assets	Financial derivative liabilities	Valuation gain	Valuation loss	Transaction gain	Transaction loss
	(In millions)					
Oil price option	₩ -	₩ 13,029	₩ -	₩ 13,029	₩ -	₩ 126
Interest rate swaps	-	38	-	37	44	-
Cross-currency interest rate swaps	14,021	42,115	32,378	10,548	48,110	10,387
	₩ 14,021	₩ 55,182	₩ 32,378	₩ 23,614	₩ 48,154	₩ 10,513

	Translation into U.S. dollars (Note 2)					
	Consolidated statement of financial position		Consolidated statement of comprehensive income (loss)			
Derivative instruments	Financial derivative assets	Financial derivative liabilities	Valuation gain	Valuation loss	Transaction gain	Transaction loss
	(In thousands)					
Oil price option	$ -	$ 11,653	$ -	$ 11,653	$ -	$ 112
Interest rate swaps	-	34	-	33	38	-
Cross-currency interest rate swaps	12,541	37,666	28,958	9,434	43,029	9,290
	$ 12,541	$ 49,353	$ 28,958	$ 21,120	$ 43,067	$ 9,402

27. OTHER LIABILITIES:

Other liabilities as of December 31, 2018 and 2017, consist of the following:

	Korean won							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In millions)							
Advances	₩	1,353,561	₩	-	₩	1,027,944	₩	-
Withholdings		123,506		64,922		111,394		64,371
Unearned revenues		304,533		-		357,680		-
Others		747		25,387		191		19,939
	₩	1,782,347	₩	90,309	₩	1,497,209	₩	84,310

	Translation into U.S. dollars (Note 2)							
	2018				2017			
	Current		Non-current		Current		Non-current	
	(In thousands)							
Advances	$	1,210,590	$	-	$	919,367	$	-
Withholdings		110,460		58,064		99,628		57,572
Unearned revenues		272,367		-		319,899		-
Others		669		22,706		172		17,834
	$	1,594,086	$	80,770	$	1,339,066	$	75,406

28. CAPITAL STOCK:

(1) Capital stock as of December 31, 2018, and 2017, consists of the following:

	Number of shares authorized	Number of shares issued	Par value	Korean won 2018	Korean won 2017	Translation into U.S. dollars (Note 2) 2018	Translation into U.S. dollars (Note 2) 2017
				(In millions)		(In thousands)	
Common stock	250,000,000	94,844,634	₩ 5,000	₩ 474,223	₩ 474,223	$ 424,133	$ 424,133
Preferred stock (*)		1,110,794	5,000	5,554	5,554	4,967	4,967
	250,000,000	95,955,428		₩ 479,777	₩ 479,777	$ 429,100	$ 429,100

(*) As the non-voting preferred stock, in case of cash dividends, it gets 1% more dividends than the common stock. If the Group cannot pay dividends, the preferred stock gets voting rights from the resolution at the next general meeting of shareholders when the Group does not pay dividends to the resolution at the general meeting of shareholders when the Group pays dividends.

(2) Changes in number of stocks issued for the year ended December 31, 2018 and 2017, are as follows:

	2018		2017	
	Common stock	Preferred stock	Common stock	Preferred stock
Beginning balance	94,844,634	1,110,794	72,839,744	1,110,794
Paid-in capital increase	-	-	22,004,890	-
Ending balance	94,844,634	1,110,794	94,844,634	1,110,794

29. OTHER CAPITAL SURPLUS:

(1) Other capital surplus as of December 31, 2018, and 2017, consists of the following:

	Korean won				Translation into U.S. dollars (Note 2)			
	2018		2017		2018		2017	
	(In millions)				(In thousands)			
Additional paid-in capital	₩	946,195	₩	946,195	$	846,253	$	846,253
Other capital		773,955		956,019		692,205		855,039
	₩	1,720,150	₩	1,902,214	$	1,538,458	$	1,701,292

(2) Changes in additional paid-in capital for the year ended December 31, 2018 and 2017, are as follows:

	Korean won				Translation into U.S. dollars (Note 2)			
	2018		2017		2018		2017	
	(In millions)				(In thousands)			
Beginning balance	₩	946,195	₩	602,855	$	846,253	$	539,178
Paid-in capital increase (*)		-		343,340		-		307,075
Ending balance	₩	946,195	₩	946,195	$	846,253	$	846,253

(*) 22,004,890 common shares were issued for the year ended December 31, 2017.

(3) Changes in other capital for the years ended December 31, 2018 and 2017, are as follows:

	Korean won				Translation into U.S. dollars (Note 2)			
	2018		2017		2018		2017	
	(In millions)				(In thousands)			
Beginning balance	₩	956,019	₩	595,519	$	855,039	$	532,617
Gain from assets contributed		-		27,169		-		24,300
Issuance of hybrid securities		367,686		333,427		328,848		298,209
Repayment of hybrid securities		(549,750)		-		(491,682)		-
Acquire of fractional shares		-		-		-		-
Others		-		(96)		-		(87)
Ending balance	₩	773,955	₩	956,019	$	692,205	$	855,039

(4) Hybrid securities as of December 31, 2018, and 2017, consist of the following:

	Date of issue	Maturity	Interest rate	Korean won				Translation into U.S. dollars (Note 2)			
				2018		2017		2018		2017	
				(In millions)				(In thousands)			
Unsecured bearer debenture (*1)	2013-06-28	2043-06-28	-	₩	-	₩	208,860	$	-	$	186,799
Registered guaranteed debenture (*2)	2015-11-25	2045-11-25	-		-		341,551		-		305,474
Registered guaranteed debenture (*3)	2017-06-12	2047-06-12	6.88%		333,427		333,427		298,209		298,209
Unsecured bearer debenture (*4)	2018-06-22	2048-06-22	5.40%		208,693		-		186,650		-
Unsecured bearer debenture (*4)	2018-11-27	2048-11-27	5.40%		158,992		-		142,198		-
				₩	701,112	₩	883,838	$	627,057	$	790,482

(*1) The Group may exercise early repayment rights on the day when five years have passed or one year after the above date of issue of the New Capital Securities, and has completed exercising the right of early repayment for the year ended December 31, 2018.

(*2) The Group may exercise early repayment rights on the day when three years have passed or six months after the above date of issue of the New Capital Securities, and has completed exercising the right of early repayment for the year ended December 31, 2018.

(*3) The interest rate is 6.875% for 3.5 years after issuance (The Group enters into a euro foreign exchange and swap contract to pay 4.875% interest annually to the swap bank and receive 6.875% interest from the swap bank. Therefore, except for exchange rate fluctuations, The Group's actual interest rate is 4.875% per annum). After three-and-a-half years and every three years after three-and-a-half years, U.S. Treasury + interest rate (5.44%) + 5% interest rate are applied. The Group may exercise the right of early repayment every six months after 3.5 years of the securities issuance. If notice of willingness to extend maturity is notified one month prior to the maturity date, maturity can be extended for 30 years under the same condition.

(*4) The interest rate is 5.40% during two years from issuance, and the increased interest rate ((5.40%+ 2.50% + <the national Treasury bond rate after two years - the national bond rate at issue>) is applied after the two years. The Group may exercise the right of annual advance redemption from two years of the hybrid securities issuance. If notice of willingness to extend maturity is notified one month prior to the maturity date, maturity can be extended for 30 years under the same condition. In addition, the Group can choose to not pay the interest on hybrid securities based on the decision to extend maturity. However, the Group cannot suspend payment of the interest if the decision on stock dividend, purchase and redemption of stocks, and profit retirement occurred in the last 12 months.

30. RETAINED EARNINGS AND DIVIDENDS:

(1) Retained earnings as of December 31, 2018, and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Legal reserve:				
Legal appropriated retained earnings (*)	₩ 5,856	₩ 3,927	$ 5,238	$ 3,512
Unappropriated retained earnings	75,905	572,748	67,887	512,251
	₩ 81,761	₩ 576,675	$ 73,125	$ 515,763

(*) The Korean Commercial Code requires the Group to appropriate as legal reserve an amount equal to at least 10% of cash dividends paid for each accounting period until the reserve equals 50% of the stated capital. The legal reserve may be used to reduce a deficit or transferred to capital stock.

(2) Changes in retained earnings for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Beginning balance	₩ 576,675	₩ (192,877)	$ 515,763	$ (172,504)
Effect of changes in accounting policies	(44,728)	-	(40,003)	-
Net income (loss)	(193,045)	791,510	(172,654)	707,906
Remeasurement of the net defined benefit liabilities	(217,258)	12,033	(194,310)	10,762
Transfer of revaluation surplus	28,798	-	25,756	-
Dividends from hybrid securities	(44,484)	(32,993)	(39,785)	(29,508)
Cash dividends	(24,044)	-	(21,505)	-
Disposal of financial assets at FVTOCI	(102)	-	(91)	-
Others	(51)	(998)	(46)	(893)
Ending balance	₩ 81,761	₩ 576,675	$ 73,125	$ 515,763

(3) Details of the dividend payment for the years ended December 31, 2018 and 2017, are as follows:

2018

	Korean won		Translation into U.S. dollars (Note 2)	
	Common stock	Preferred stock	Common stock	Preferred stock
	(Shares, in millions)		(Shares, in thousands)	
Number of stocks	94,844,611	1,110,792	94,844,611	1,110,792
Par value	₩ 5,000	₩ 5,000	$ 5	$ 5
Dividend rate	5.00%	6.00%	5.00%	6.00%
Dividend	₩ 23,711	₩ 333	$ 21,207	$ 298

2017

	Korean won		Translation into U.S. dollars (Note 2)	
	Common stock	Preferred stock	Common stock	Preferred stock
	(Shares, in millions)		(Shares, in thousands)	
Number of stocks	94,844,614	1,110,793	94,844,614	1,110,793
Par value	₩ 5,000	₩ 5,000	$ 5	$ 5
Dividend rate	5.00%	6.00%	5.00%	6.00%
Dividend	₩ 23,711	₩ 333	$ 21,207	$ 298

In addition to the above cash dividend, The Group paid dividend from hybrid securities for the year ended December 31, 2018 and 2017.

31. OTHER CAPITAL COMPONENTS:

(1) Other capital components as of December 31, 2018, and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Gain on valuation of AFS financial assets, net	₩ -	₩ 68,440	$ -	$ 61,211
Gain on financial assets at FVTOCI	36,777	-	32,892	-
Change in retained earnings – equity method-accounted investments	(554)	(1,606)	(495)	(1,437)
Cumulative effect of foreign currency translation	(31,584)	(58,435)	(28,248)	(52,263)
Revaluation surplus	616,518	630,444	551,398	563,853
	621,157	638,843	555,547	571,364
Assets held for sale:	-	-	-	-
Change in retained earnings – equity method-accounted investments	-	2,683	-	2,400
Revaluation surplus	5,876	29,246	5,255	26,157
	₩ 627,033	₩ 670,772	$ 560,802	$ 599,921

(2) Gain on valuation of financial assets at FVTOCI, net and gain on valuation of AFS financial assets, net

Changes in gain on valuation of financial assets at FVTOCI, net, for the years ended December 31, 2018 and gain on valuation of AFS financial assets, net, for the years ended December 31, 2017, are as follows:

2018

	Korean won			Translation into U.S. dollars (Note 2)		
	Equity instruments (*)	Debt instruments	Total	Equity instruments(*)	Debt instruments	Total
	(In millions)			(In thousands)		
Restatement of beginning balance						
Accumulated gain on valuation of AFS financial assets (K-IFRS 1039)	₩ 68,440	₩ -	₩ 68,440	$ 61,211	$ -	$ 61,211
Adjustment on initial application of K-IFRS 1109	(5,726)	-	(5,726)	(5,121)	-	(5,121)
Remeasurements (fair value option)	(33,957)		(33,957)	(30,370)		(30,370)
Tax effect of remeasurements	7,919	-	7,919	7,082	-	7,082
The amounts of retained earnings transferred arising from derecognition of equity instruments	101	-	101	90	-	90
	₩ 36,777	₩ -	₩ 36,777	$ 32,892	$ -	$ 32,892

(*) For the investments revaluation reserve in equity instruments at FVTOCI, the equity instruments are stated as the net amounts of accumulated revaluation deducted directly from the amounts of retained earnings transferred arising from derecognition of equity instruments.

Equity instruments at FVTOCI are not subject to impairment.

2017

	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Beginning balance	₩ 40,120	₩ 35,882
Gain (loss) on revaluation of assets	28,320	25,329
Ending balance	₩ 68,440	₩ 61,211

(3) Changes in revaluation surplus for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Beginning balance	₩ 630,444	₩ 312,874	$ 563,853	$ 279,826
Gain on revaluation of assets	-	346,817	-	310,185
Transfer to assets held for sale	(5,427)	(29,247)	(4,854)	(26,158)
The effect of changes in tax rates	(8,499)	-	(7,601)	-
Ending balance	₩ 616,518	₩ 630,444	$ 551,398	$ 563,853

32. SALES:

The Group profits by transferring goods and services over time or at a point in time through contracts with customers in the following key business lines. The classification of key business lines is consistent with the disclosure of revenue by reportable segment in accordance with K-IFRS 1108.

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Air transport revenue	₩ 12,050,366	₩ 11,103,135	$ 10,777,539	$ 9,930,359
Other revenue	969,910	989,076	867,462	884,605
	₩ 13,020,276	₩ 12,092,211	$ 11,645,001	$ 10,814,964

33. SELLING AND ADMINISTRATIVE EXPENSES:

Selling and administrative expenses for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Salaries	₩ 298,512	₩ 293,531	$ 266,981	$ 262,527
Retirement and severance benefits	30,789	31,184	27,537	27,891
Depreciation	50,423	12,734	45,097	11,389
Amortization	14,025	29,032	12,543	25,965
Rental	14,480	17,801	12,951	15,921
Sales commission	440,640	323,360	394,097	289,205
Advertising	110,061	83,558	98,436	74,732
Welfare	86,251	70,431	77,141	62,992
Training	8,607	8,255	7,698	7,383
Communications	25,245	24,415	22,578	21,836
Taxes and dues	24,129	23,296	21,581	20,835
Facility maintenance	11,811	11,293	10,564	10,100
Commission	183,854	156,262	164,434	139,757
Others	77,622	76,125	69,423	68,083
	₩ 1,376,449	₩ 1,161,277	$ 1,231,061	$ 1,038,616

34. FINANCIAL INCOME AND EXPENSES:

(1) Financial income for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Interest income	₩ 41,386	₩ 30,831	$ 37,015	$ 27,575
Dividend income	3,888	4,587	3,477	4,103
Gain on valuation of derivatives	32,378	126	28,958	112
Gain on derivatives transaction	48,154	37,328	43,067	33,385
	₩ 125,806	₩ 72,872	$ 112,517	$ 65,175

(2) Financial expenses for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Interest expense	₩ 546,353	₩ 457,334	$ 488,644	$ 409,028
Loss on valuation of derivatives	23,614	57,498	21,120	51,425
Loss on derivatives transaction	10,513	15,830	9,402	14,157
	₩ 580,480	₩ 530,662	$ 519,166	$ 474,610

35. OTHER NON-OPERATING INCOME AND EXPENSES:

(1) Other non-operating income for the years ended December 31, 2018 and 2017, consists of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Gain on foreign currency transaction	₩ 149,214	₩ 398,876	$ 133,453	$ 356,744
Gain on foreign currency translation	93,129	991,880	83,292	887,112
Reversal of allowance for other doubtful accounts	769	331	688	296
Gain on disposal of AFS financial asset	-	4,503	-	4,027
Gain on disposal of property, aircraft and equipment	10,729	36,291	9,596	32,458
Gain on disposal of assets held for sale	41,694	56	37,290	50
Gain on disposal of intangible assets	184	1,397	164	1,250
Reversal of revaluation loss on property, aircraft and equipment	-	3,077	-	2,752
Miscellaneous income	39,331	56,718	35,177	50,728
	₩ 335,050	₩ 1,493,129	$ 299,660	$ 1,335,417

(2) Other non-operating expenses for the years ended December 31, 2018 and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Other bad debt expenses	₩ 347	₩ 113	$ 310	$ 101
Loss on foreign currency transaction	249,247	209,497	222,920	187,369
Loss on foreign currency translation	356,308	185,794	318,673	166,169
Impairment loss on AFS financial assets	-	715	-	639
Impairment loss on investments in associates	-	25,009	-	22,367
Loss on disposal of AFS financial asset	-	639	-	572
Loss on disposal of investment in subsidiaries	-	965	-	863
Loss on disposal of property, aircraft and equipment	10,439	263,477	9,337	235,647
Loss on disposal of asset held for sale	-	270	-	241
Impairment loss on property, aircraft and equipment	20,278	69,502	18,137	62,161
Impairment loss on investment properties	403	-	360	-
Loss on revaluation of property, aircraft and equipment	-	18,612	-	16,646
Impairment loss on intangible assets	-	103	-	92
Donation	12,365	12,397	11,059	11,088
Miscellaneous loss	80,482	77,649	71,980	69,448
	₩ 729,869	₩ 864,742	$ 652,776	$ 773,403

36. INCOME TAX EXPENSES:

(1) Income tax benefit for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Current income tax expense	₩ 4,914	₩ 22,792	$ 4,395	$ 20,385
± Changes in deferred taxes due to temporary differences (*)	(56,373)	193,342	(50,419)	172,920
± Tax loss carryforward (**)	(70,217)	226,410	(62,800)	202,495
Total amount of income tax effect	(121,676)	442,544	(108,824)	395,800
± Items recorded directly in equity	98,644	(122,743)	88,225	(109,777)
Income tax expenses (benefit)	₩ (23,032)	₩ 319,801	$ (20,599)	$ 286,023
(*) Temporary differences — deferred tax assets at the end of the year	519,607	463,234	464,723	414,304
Temporary differences — deferred tax assets at the beginning of the year	463,234	656,576	414,304	587,224
Changes in deferred taxes due to temporary differences	(56,373)	193,342	(50,419)	172,920
(**) Tax loss carryforward — deferred tax assets at the end of the year	268,813	198,595	240,419	177,618
Tax loss carryforward — deferred tax assets at the beginning of the year	198,596	425,005	177,619	380,113
Changes in deferred taxes due to tax loss carryforward	₩ (70,217)	₩ 226,410	$ (62,800)	$ 202,495

(2) Reconciliation between income (loss) before income tax expense (benefit) and income tax expense (benefit) for the years ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Income (loss) before income tax expense (benefit)	₩ (208,683)	₩ 1,121,698	$ (186,641)	$ 1,003,219
Assessed tax on the applicable rates	(50,244)	270,989	(44,937)	242,366
Adjustments:				
Non-temporary differences	5,905	15,646	5,282	13,994
Tax credits	10,354	1,927	9,260	1,723
Others	10,953	31,239	9,796	27,940
Income tax expense (benefit)	₩ (23,032)	₩ 319,801	$ (20,599)	$ 286,023
Effective tax rate (%) (*)	-	28.51%	-	28.51%

(*) The effective tax rate was not computed due to net loss before income tax benefit for the years ended December 31, 2018.

(3) Changes in temporary differences and deferred income tax assets (liabilities) as of and for the years ended December 31, 2018 and 2017, are as follows:

2018

Description	Beginning balance (*)	Increase (decrease) (*)	Ending balance
	Korean won (In millions)		
Temporary differences:			
Defined benefit obligations	₩ 1,122,443	₩ 359,093	₩ 1,481,536
Provision for leased aircraft maintenance	119,176	52,207	171,383
Depreciation and amortization	(239,728)	(261,755)	(501,483)
Deferred revenue	2,098,102	180,551	2,278,653
Gain from assets contributed	3,001	-	3,001
Gain (loss) on foreign currency translation	-	14	14
Accrued expenses	109,265	9,296	118,561
Gain on valuation of AFS financial assets	(85,265)	24,028	(61,237)
Gain on revaluation of land	(751,835)	(32,190)	(784,025)
Gain on valuation of derivatives	68,982	(27,932)	41,050
Gain on revaluation of assets	(124,852)	(41,241)	(166,093)
Others	(62,309)	(131,257)	(193,566)
	₩ 2,256,980	₩ 130,814	₩ 2,387,794
Tax loss carryforward	902,878	124,345	1,027,223
Tax credits	25,968	(10,327)	15,641
Deferred tax assets	661,829	126,590	788,419

Description	Beginning balance (*)	Increase (decrease) (*)	Ending balance
	Translation into U.S. dollars (Note 2) (In thousands)		
Temporary differences:			
Defined benefit obligation	$ 1,003,884	$ 321,164	$ 1,325,048
Provision for leased aircraft maintenance	106,588	46,693	153,281
Depreciation and amortization	(214,407)	(234,106)	(448,513)
Deferred revenue	1,876,488	161,481	2,037,969
Gain from assets contributed	2,684	-	2,684
Gain (loss) on foreign currency translation	-	12	12
Accrued expenses	97,724	8,314	106,038
Gain on valuation of AFS financial assets	(76,259)	21,490	(54,769)
Gain on revaluation of land	(672,422)	(28,790)	(701,212)
Gain on valuation of derivatives	61,696	(24,982)	36,714
Gain on revaluation of assets	(111,664)	(36,885)	(148,549)
Others	(55,729)	(117,392)	(173,121)
	$ 2,018,583	$ 116,999	$ 2,135,582
Tax loss carryforward	807,511	111,211	918,722
Tax credits	23,225	(9,236)	13,989
Deferred tax assets	591,923	113,219	705,142

2017

Description	Beginning balance (*)	Increase (decrease) (*)	Ending balance
	Korean won (In millions)		
Temporary differences:			
Defined benefit obligations	₩ 1,098,409	₩ 24,034	₩ 1,122,443
Provision for leased aircraft maintenance	141,631	(22,455)	119,176
Depreciation and amortization	41,873	(281,601)	(239,728)
Deferred revenue	1,899,913	198,189	2,098,102
Gain from assets contributed	3,156	(155)	3,001
Accrued expenses	101,411	7,854	109,265
Guaranteed loans	(601)	601	-
Gain on valuation of AFS financial assets	(52,868)	(32,397)	(85,265)
Gain on revaluation of land	(751,835)	-	(751,835)
Gain on valuation of derivatives	16,290	52,692	68,982
Gain on revaluation of assets	(97,311)	(27,541)	(124,852)
Others	743,686	(805,995)	(62,309)
	₩ 3,143,754	₩ (886,774)	₩ 2,256,980
Tax loss carryforward	1,642,491	(739,614)	902,877
Tax credits	43,814	(17,845)	25,969
Deferred tax assets	1,081,581	(419,752)	661,829

Description	Beginning balance (*)	Increase (decrease) (*)	Ending balance
	Translation into U.S. dollars (Note 2) (In thousands)		
Temporary differences:			
Defined benefit obligation	$ 982,389	$ 21,495	$ 1,003,884
Provision for leased aircraft maintenance	126,671	(20,083)	106,588
Depreciation and amortization	37,450	(251,857)	(214,407)
Deferred revenue	1,699,233	177,255	1,876,488
Gain from assets contributed	2,822	(138)	2,684
Accrued expenses	90,700	7,024	97,724
Guaranteed loans	(537)	537	-
Gain on valuation of AFS financial assets	(47,284)	(28,975)	(76,259)
Gain on revaluation of land	(672,422)	-	(672,422)
Gain on valuation of derivatives	14,570	47,126	61,696
Gain on revaluation of assets	(87,032)	(24,632)	(111,664)
Others	665,132	(720,861)	(55,729)
	$ 2,811,692	$ (793,109)	$ 2,018,583
Tax loss carryforward	1,469,003	(661,492)	807,511
Tax credits	39,185	(15,960)	23,225
Deferred tax assets	967,338	(375,415)	591,923

(*) Beginning temporary differences include temporary differences recognized as deferred income tax assets (liabilities) as of December 31, 2018 and 2017, which have been partially adjusted during actual tax adjustments for the years ended December 31, 2018 and 2017. Therefore, the Group reflected the aforementioned adjustment in the change in temporary differences for the years ended December 31, 2018 and 2017.

(4) Deferred income tax expense directly adjusted to shareholders' equity as of December 31, 2018 and 2017, consists of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Deferred income tax expense directly adjusted to shareholders' equity:				
Other additional capital	₩ -	₩ (9,173)	$ -	$ (8,204)
Gain on valuation of financial assets at FVTOCI	7,788	(9,553)	6,966	(8,544)
Adjustment on initial application of K-IFRS 1109 (other comprehensive income)	1,099	-	983	-
Adjustment on initial application of K-IFRS 1109 (retained earnings)	(1,099)	-	(983)	-
Adjustment on initial application of K-IFRS 1115 (retained earnings)	18,294	-	16,362	-
Remeasurement of net defined benefit liabilities	76,530	(1,861)	68,447	(1,664)
Revaluation surplus	(9,086)	(103,928)	(8,127)	(92,951)
	93,526	(115,342)	83,648	(103,159)
Deferred income tax expense directly adjusted to non-controlling interests	5,118	(7,399)	4,577	(6,618)
	₩ 98,644	₩ (122,741)	$ 88,225	$ (109,777)

(5) Deductible temporary differences, tax loss and unused tax credits, not recognized as deferred tax assets as of December 31, 2018 and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Investment in subsidiaries and associates and others	₩ 520,016	₩ 370,517	$ 465,089	$ 331,381
Guarantee fees	16,461	-	14,722	-
Tax loss	16,381	198,683	14,651	177,697
Unused tax credits	11,410	-	10,204	-
Deductible temporary differences	26,251	-	23,479	-
	₩ 590,519	₩ 569,200	$ 528,145	$ 509,078

(6) The expiration dates of unused tax credits not recognized as deferred tax assets as of December 31, 2018 and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Within one year	₩ 11,410	₩ -	$ 10,204	$ -

37. CLASSIFICATION OF EXPENSES BY NATURE:

Expenses classified by nature for years ended December 31, 2018 and 2017, consist of the following:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Salaries and retirement benefit costs	₩ 1,981,186	₩ 1,884,488	$ 1,771,922	$ 1,685,438
Welfare	455,582	362,259	407,461	323,995
Depreciation and amortization	1,741,677	1,693,015	1,557,711	1,514,189
Rental	348,529	360,924	311,715	322,801
Fuel and oil charges	3,283,052	2,602,777	2,936,278	2,327,857
Airport-related costs	1,124,120	1,065,297	1,005,384	952,774
Sales commission	440,640	323,360	394,097	289,205
Others	3,005,200	2,860,309	2,687,774	2,558,188
	₩ 12,379,986	₩ 11,152,429	$ 11,072,342	$ 9,974,447

(*) The amount is the sum of cost of sales and selling and administrative expenses from continuing operations in the consolidated statements of comprehensive income (loss).

38. EARNINGS (LOSS) PER SHARE:

Basic earnings (loss) per share for years ended December 31, 2018 and 2017, are as follows (in millions of Korean won and in thousands of U.S. dollars, except for share data and earnings (loss) per share):

(1) Common shares

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
Net income (loss) attributable to owners of the parent company	₩ (193,045)	₩ 791,510	$ (172,654)	$ 707,906
Income (loss) attributable to common shares	(190,865)	781,859	(170,705)	699,274
Weighted-average number of common shares outstanding	94,844,613	90,503,927	94,844,613	90,503,927
Earnings (loss) per common share (*)	(2,012)	8,639	(2)	8

(*) Diluted earnings (loss) per share for the years ended December 31, 2018 and 2017, are the same as the basic earnings (loss) per share, as there are no dilutive potential common shares and dilutive effect.

(2) Preferred shares

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
Net income (loss) attributable to owners of the parent company	₩ (2,180)	₩ 9,652	$ (1,950)	$ 8,632
Weighted-average number of preferred shares outstanding	1,110,793	1,110,794	1,110,793	1,110,794
Earnings (loss) per preferred share	(1,962)	8,689	(2)	8

(3) The contents of weighted-average common shares for the years ended December 31, 2018 and 2017, are as follows:

	Number of shares	
	2018	2017
Cumulative number of weighted-average common shares	34,618,283,834	33,033,933,490
Cumulative number of weighted-average preferred shares	405,439,353	405,439,810
Number of days	365	365
Weighted-average number of common shares outstanding	94,844,613	90,503,927
Weighted-average number of preferred shares outstanding	1,110,793	1,110,794

39. FINANCIAL INSTRUMENTS:

(1) Classification and fair value of financial assets by category

Book value, fair value and fair value of financial instruments based on their nature and characteristics are as follows (fair value hierarchy Levels 1 to 3 are based on the degree to which the fair value is observable):

(Level 1) Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
(Level 2) Inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
(Level 3) Inputs are unobservable inputs for the asset or liability.

a. Financial assets

2018

Classification	Korean won			
	Financial assets at FVTPL	Financial assets at FVTOCI	Financial assets at amortized cost	Total
	(In millions)			
Cash and cash equivalents	₩ -	₩ -	₩ 1,503,951	₩ 1,503,951
Short- and long-term financial instruments	-	-	238,384	238,384
Financial assets at amortized cost	-	-	326	326
Financial assets at FVTPL:				
Beneficiary certificates	5,600	-	-	5,600
Investments in other equity securities	16,120	-	-	16,120
Derivative financial assets	14,021	-	-	14,021
Financial assets at FVTOCI:				
Listed securities	-	99,875	-	99,875
Unlisted securities	-	48,338	-	48,338
Trade and other receivables	-	-	844,195	844,195
Finance lease receivables	-	-	128,963	128,963
Other financial assets	-	-	210,862	210,862
	₩ 35,741	₩ 148,213	₩ 2,926,681	₩ 3,110,635

Classification	Translation into U.S. dollars (Note 2)			
	Financial assets at FVTPL	Financial assets at FVTOCI	Financial assets at amortized cost	Total
	(In thousands)			
Cash and cash equivalents	$ -	$ -	$ 1,345,096	$ 1,345,096
Short- and long-term financial instruments	-	-	213,204	213,204
Financial assets at amortized cost	-	-	291	291
Financial assets at FVTPL:				
Beneficiary certificates	5,008	-	-	5,008
Investments in other equity securities	14,417	-	-	14,417
Derivative financial assets	12,541	-	-	12,541
Financial assets at FVTOCI:				
Listed securities	-	89,326	-	89,326
Unlisted securities	-	43,233	-	43,233
Trade and other receivables	-	-	755,026	755,026
Finance lease receivables	-	-	115,341	115,341
Other financial assets	-	-	188,589	188,589
	$ 31,966	$ 132,559	$ 2,617,547	$ 2,782,072

Classification	Korean won			
	Level 1	Level 2	Level 3	Total
	(In millions)			
Cash and cash equivalents	₩ 1,503,951	₩ -	₩ -	₩ 1,503,951
Short- and long-term financial instruments	238,384	-	-	238,384
Financial assets at amortized cost	-	326	-	326
Financial assets at FVTPL:				
Beneficiary certificates	-	-	5,600	5,600
Investments in other equity securities	-	-	16,120	16,120
Derivative financial assets	-	14,021	-	14,021
Financial assets at FVTOCI:				
Listed securities	99,875	-	-	99,875
Unlisted securities	-	-	48,338	48,338
Trade and other receivables	-	-	844,195	844,195
Finance lease receivables	-	-	128,963	128,963
Other financial assets	-	-	210,862	210,862
	₩ 1,842,210	₩ 14,347	₩ 1,254,078	₩ 3,110,635

Classification	Translation into U.S. dollars (Note 2)			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Cash and cash equivalents	$ 1,345,096	$ -	$ -	$ 1,345,096
Short- and long-term financial instruments	213,204	-	-	213,204
Financial assets at amortized cost	-	291	-	291
Financial assets at FVTPL:				
Beneficiary certificates	-	-	5,008	5,008
Investments in other equity securities	-	-	14,417	14,417
Derivative financial assets	-	12,541	-	12,541
Financial assets at FVTOCI:				
Listed securities	89,326	-	-	89,326
Unlisted securities	-	-	43,233	43,233
Trade and other receivables	-	-	755,026	755,026
Finance lease receivables	-	-	115,341	115,341
Other financial assets	-	-	188,589	188,589
	$ 1,647,626	$ 12,832	$ 1,121,614	$ 2,782,072

2017

Description	Loans and receivables	Financial assets at FVTPL	Held-to-maturity financial assets	AFS financial assets	Total
	Korean won (In millions)				
Cash and cash equival	₩ 761,235	₩ -	₩ -	₩ -	₩ 761,235
Short- and long-term financial instruments	516,128	-	-	-	516,128
Held-to-maturity financial assets	-	-	1,037	-	1,037
AFS:					
Listed securities	-	-	-	127,854	127,854
Unlisted securities	-	-	-	54,965	54,965
Beneficiary certifica	-	-	-	4,200	4,200
Investments in othe equity securities	-	-	-	15,145	15,145
Others	-	-	-	21	21
Trade and other receivables	757,063	-	-	-	757,063
Derivative financial as	-	126	-	-	126
Finance lease receivat	157,030	-	-	-	157,030
Other financial assets	262,366	-	-	-	262,366
	₩ 2,453,822	₩ 126	₩ 1,037	₩ 202,185	₩ 2,657,170

Description	Loans and receivables	Financial assets at FVTPL	Held-to-maturity financial assets	AFS financial assets	Total
	Translation into U.S. dollars (Note 2) (In thousands)				
Cash and cash equival	$ 680,829	$ -	$ -	$ -	$ 680,829
Short- and long-term financial instruments	461,611	-	-	-	461,611
Held-to-maturity financial assets	-	-	928	-	928
AFS:					
Listed securities	-	-	-	114,349	114,349
Unlisted securities	-	-	-	49,159	49,159
Beneficiary certifica	-	-	-	3,756	3,756
Investments in othe equity securities	-	-	-	13,545	13,545
Others	-	-	-	19	19
Trade and other receivables	677,098	-	-	-	677,098
Derivative financial as	-	112	-	-	112
Finance lease receivat	140,444	-	-	-	140,444
Other financial assets	234,654	-	-	-	234,654
	$ 2,194,636	$ 112	$ 928	$ 180,828	$ 2,376,504

Classification	Level 1	Level 2	Level 3	Total
	Korean won			
	(In millions)			
Cash and cash equivalents	₩ 761,235	₩ -	₩ -	₩ 761,235
Short- and long-term financial instruments	516,128	-	-	516,128
Held-to-maturity financial assets	-	1,037	-	1,037
AFS:				
Listed securities	127,854	-	-	127,854
Unlisted securities	-	-	54,965	54,965
Beneficiary certificates	-	-	4,200	4,200
Investments in other equity securities	-	-	15,145	15,145
Others	21	-	-	21
Trade and other receivables	-	-	757,063	757,063
Derivative financial assets	-	126	-	126
Finance lease receivables	-	-	157,030	157,030
Other financial assets	-	-	262,366	262,366
	₩ 1,405,238	₩ 1,163	₩ 1,250,769	₩ 2,657,170

Classification	Level 1	Level 2	Level 3	Total
	Translation into U.S. dollars (Note 2)			
	(In thousands)			
Cash and cash equivalents	$ 680,829	$ -	$ -	$ 680,829
Short- and long-term financial instruments	461,611	-	-	461,611
Held-to-maturity financial assets	-	928	-	928
AFS:	-	-	-	-
Listed securities	114,349	-	-	114,349
Unlisted securities	-	-	49,159	49,159
Beneficiary certificates	-	-	3,756	3,756
Investments in other equity securities	-	-	13,545	13,545
Others	19	-	-	19
Trade and other receivables	-	-	677,098	677,098
Derivative financial assets	-	112	-	112
Finance lease receivables	-	-	140,444	140,444
Other financial assets	-	-	234,654	234,654
	$ 1,256,808	$ 1,040	$ 1,118,656	$ 2,376,504

b. Financial liabilities

2018

Description	Korean won Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	(In millions)		
Trade and other payables	₩ -	₩ 951,711	₩ 951,711
Borrowings	-	5,950,885	5,950,885
Debentures	-	2,301,709	2,301,709
Financial derivative liabilities	55,182	-	55,182
Finance lease obligations	-	7,486,605	7,486,605
	₩ 55,182	₩ 16,690,910	₩ 16,746,092

Description	Translation into U.S. dollars (Note 2) Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	(In thousands)		
Trade and other payables	$ -	$ 851,186	$ 851,186
Borrowings	-	5,322,321	5,322,321
Debentures	-	2,058,590	2,058,590
Financial derivative liabilities	49,353	-	49,353
Finance lease obligations	-	6,695,828	6,695,828
	$ 49,353	$ 14,927,925	$ 14,977,278

Classification	Korean won Level 1	Level 2	Level 3	Total
	(In millions)			
Trade and other payables	₩ -	₩ -	₩ 951,711	₩ 951,711
Borrowings	-	-	5,950,885	5,950,885
Debentures	-	-	2,301,709	2,301,709
Financial derivative liabilities	-	55,182	-	55,182
Finance lease obligations	-	-	7,486,605	7,486,605
	₩ -	₩ 55,182	₩ 16,690,910	₩ 16,746,092

Classification	Translation into U.S. dollars (Note 2) Level 1	Level 2	Level 3	Total
	(In thousands)			
Trade and other payables	$ -	$ -	$ 851,186	$ 851,186
Borrowings	-	-	5,322,321	5,322,321
Debentures	-	-	2,058,590	2,058,590
Financial derivative liabilities	-	49,353	-	49,353
Finance lease obligations	-	-	6,695,828	6,695,828
	$ -	$ 49,353	$ 14,927,925	$ 14,977,278

2017

Description	Korean won Financial liabilities at FVTPL		Financial liabilities recognized at amortized cost		Total	
	(In millions)					
Trade and other payables	₩	-	₩	923,220	₩	923,220
Borrowings		-		5,372,644		5,372,644
Debentures		-		1,897,570		1,897,570
Financial derivative liabilities		69,108		-		69,108
Finance lease obligations		-		7,575,128		7,575,128
	₩	69,108	₩	15,768,562	₩	15,837,670

Description	Translation into U.S. dollars (Note 2) Financial liabilities at FVTPL		Financial liabilities recognized at amortized cost		Total	
	(In thousands)					
Trade and other payables	$	-	$	825,704	$	825,704
Borrowings		-		4,805,155		4,805,155
Debentures		-		1,697,138		1,697,138
Financial derivative liabilities		61,808		-		61,808
Finance lease obligations		-		6,775,000		6,775,000
	$	61,808	$	14,102,997	$	14,164,805

Classification	Korean won Level 1		Level 2		Level 3		Total	
	(In millions)							
Trade and other payables	₩	-	₩	-	₩	923,220	₩	923,220
Borrowings		-		-		5,372,644		5,372,644
Debentures		-		-		1,897,570		1,897,570
Financial derivative liabilities		-		69,108		-		69,108
Finance lease obligations		-		-		7,575,128		7,575,128
	₩	-	₩	69,108	₩	15,768,562	₩	15,837,670

Classification	Translation into U.S. dollars (Note 2) Level 1		Level 2		Level 3		Total	
	(In thousands)							
Trade and other payables	$	-	$	-	$	825,704	$	825,704
Borrowings		-		-		4,805,155		4,805,155
Debentures		-		-		1,697,138		1,697,138
Financial derivative liabilities		-		61,808		-		61,808
Finance lease obligations		-		-		6,775,000		6,775,000
	$	-	$	61,808	$	14,102,997	$	14,164,805

1) Financial instruments that are measured at fair value on a recurring basis

Some financial assets and financial liabilities are measured at fair value at the end of the reporting period. Here is how the fair value of these financial assets and financial liabilities is determined:

Description	Fair value: Korean won	Fair value: Translation into U.S. dollars (Note 2)	Valuation techniques	Significant unobservable inputs	Description of relationships
	(In millions)	(In thousands)			
Derivative financial assets (see Note 26)	₩ 14,022	$ 12,541	DISCOUNTED CASH FLOW AND OTHERS	N/A	N/A
Derivative financial liabilities (see Note 26)	55,182	49,353		N/A	N/A
Financial assets –FV (see Note 8)	70,058	62,658		Sales growth rate Pretax operating income ratio Weighted-average cost of capital	Fair value of non-listed shares will increase if the weighted-average cost of capital is reduced along with the increase in pretax operating margin and sales growth rate.

There is no significant movement between Level 1 and Level 2 for the years ended December 31, 2018 and 2017.

2) Changes in financial instruments that are measured at fair value on a recurring basis and classified as Level 3 for the years ended December 31, 2018 and 2017, are as follows:

	Korean won				
Description	Beginning balance	Purchase	Disposal	Other comprehensive income	Ending balance
			(In millions)		
Financial assets –FV	₩ 53,990	₩ 1,400	₩ (213)	₩ 14,881	₩ 70,058

	Translation into U.S. dollars (Note 2)				
Description	Beginning balance	Purchase	Disposal	Other comprehensive income	Ending balance
			(In thousands)		
Financial assets –FV	$ 48,287	$ 1,253	$ (191)	$ 13,309	$ 62,658

	Korean won				
Description	Beginning balance	Purchase	Disposal	Other comprehensive income	Ending balance
			(In millions)		
AFS financial assets	₩ 23,425	₩ 2,100	₩ -	₩ 28,465	₩ 53,990

	Translation into U.S. dollars (Note 2)				
Description	Beginning balance	Purchase	Disposal	Other comprehensive income	Ending balance
			(In thousands)		
AFS financial assets	$ 20,951	$ 1,878	$ -	$ 25,458	$ 48,287

Total gains and losses recognized in comprehensive income and loss relate to non-listed shares at December 31, 2018, and are recognized as change in fair value through comprehensive income (loss) (December 31, 2017: gain or loss on valuation of AFS financial assets) (see Note 37).

3) Fair value of financial assets and liabilities unmeasured subsequently at fair value

Fair values of financial instruments measured at Level 1 are based on quoted prices. Fair values of financial instruments measured at Level 2 are based on discounted cash flows and discounted future cash flows using market rates adjusted for credit risk. Financial instruments measured at amortized cost and Level 3 as of December 31, 2018 and 2017, have not been recognized.

4) Accumulated fair value changes related to financial liabilities designated at financial at FVTOCI (change in credit risk is recognized at comprehensive income (loss)) consist of the following.

Description	Fair value: Korean won	Fair value: Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Accumulated gains and losses due to changes in fair value		
Accumulated fair value changes due to changes in credit risk	₩ -	$ -
Accumulated fair value changes recognized in gain or loss	55,182	49,353
	₩ 55,182	$ 49,353

5) Income or loss (net income(loss) from continuing operations before tax effect) by category of financial instruments for the years ended December 31, 2018 and 2017, are as follows:

a. Financial assets

2018

Description	Korean won: Financial assets at FVTPL	Financial assets at FVTOCI	Held-to-maturity financial assets	Total
	(In millions)			
Interest income	₩ 3,453	₩ -	₩ 37,933	₩ 41,386
Dividend income	-	3,888	-	3,888
Bad debt expenses	-	-	(6,709)	(6,709)
Loss on foreign currency translation, net	-	-	(41,965)	(41,965)
Gain on valuation of derivatives, net	32,378	-	-	32,378
Gain on valuation of financial assets at FVTOCI, net (before income tax)	-	(34,405)	-	(34,405)
	₩ 35,831	₩ (30,517)	₩ (10,741)	₩ (5,427)

Description	Translation into U.S. dollars (Note 2): Financial assets at FVTPL	Financial assets at FVTOCI	Held-to-maturity financial assets	Total
	(In thousands)			
Interest income	$ 3,088	$ -	$ 33,927	$ 37,015
Dividend income	-	3,477	-	3,477
Bad debt expenses	-	-	(6,000)	(6,000)
Loss on foreign currency translation, net	-	-	(37,533)	(37,533)
Gain on valuation of derivatives, net	28,958	-	-	28,958
Gain on valuation of financial assets at FVTOCI, net (before income tax)	-	(30,771)	-	(30,771)
	$ 32,046	$ (27,294)	$ (9,606)	$ (4,854)

2017

Description	Korean won				
	Loans and receivables	Financial assets at FVTPL	Held-to-maturity financial assets	AFS financial assets	Total
			(In millions)		
Interest income	₩ 30,810	₩ -	₩ 22	₩ -	₩ 30,832
Dividend income	-	-	-	4,587	4,587
Bad debt expenses	(461)	-	-	-	(461)
Loss on foreign currency translation, net	(114,420)	-	-	-	(114,420)
Gain on valuation of derivatives, net	-	126	-	-	126
Gain on valuation of AFS financial assets, net (before income tax)	-	-	-	38,458	38,458
Impairment loss on AFS financial assets	-	-	-	715	715
Gain on disposal of AFS financial assets	-	-	-	5,142	5,142
	₩ (84,071)	₩ 126	₩ 22	₩ 48,902	₩ (35,021)

Description	Translation into U.S. dollars (Note 2)				
	Loans and receivables	Financial assets at FVTPL	Held-to-maturity financial assets	AFS financial assets	Total
			(In thousands)		
Interest income	$ 27,556	$ -	$ 19	$ -	$ 27,575
Dividend income	-	-	-	4,103	4,103
Bad debt expenses	(412)	-	-	-	(412)
Loss on foreign currency translation, net	(102,334)	-	-	-	(102,334)
Gain on valuation of derivatives, net	-	112	-	-	112
Gain on valuation of AFS financial assets, net (before income tax)	-	-	-	34,396	34,396
Impairment loss on AFS financial assets	-	-	-	639	639
Gain on disposal of AFS financial assets	-	-	-	4,599	4,599
	$ (75,190)	$ 112	$ 19	$ 43,737	$ (31,322)

b. Financial liabilities

2018

Description	Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	Korean won (In millions)		
Interest expense	₩ -	₩ (546,353)	₩ (546,353)
Gain on foreign currency translation, net	-	(305,968)	(305,968)
Loss on valuation of derivatives	(23,614)	-	(23,614)
Gain on derivative transactions	48,154	-	48,154
Loss on derivative transactions	(10,513)	-	(10,513)
	₩ 14,027	₩ (852,321)	₩ (838,294)

Description	Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	Translation into U.S. dollars (Note 2) (In thousands)		
Interest expense	$ -	$ (488,644)	$ (488,644)
Gain on foreign currency translation, net	-	(273,650)	(273,650)
Loss on valuation of derivatives	(21,120)	-	(21,120)
Gain on derivative transactions	43,067	-	43,067
Loss on derivative transactions	(9,402)	-	(9,402)
	$ 12,545	$ (762,294)	$ (749,749)

2017

Description	Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	Korean won (In millions)		
Interest expense	₩ (27,322)	₩ (430,012)	₩ (457,334)
Gain on foreign currency translation, net	28	929,090	929,118
Loss on valuation of derivatives	(57,498)	-	(57,498)
Gain on derivative transactions	37,328	-	37,328
Loss on derivative transactions	(15,829)	-	(15,829)
	₩ (63,293)	₩ 499,078	₩ 435,785

Description	Financial liabilities at FVTPL	Financial liabilities recognized at amortized cost	Total
	Translation into U.S. dollars (Note 2) (In thousands)		
Interest expense	$ (24,436)	$ (384,592)	$ (409,028)
Gain (loss) on foreign currency translation, net	25	830,954	830,979
Loss on valuation of derivatives	(51,425)	-	(51,425)
Gain on derivative transactions	33,385	-	33,385
Loss on derivative transactions	(14,157)	-	(14,157)
	$ (56,608)	$ 446,362	$ 389,754

(2) Purpose of managing financial risk

The financial sector manages the Group's business and organizes the approach to the domestic and international financial markets. Furthermore, it monitors and manages the financial risk related to the Group's business through internal risk reports, which analyze the scope and scale of each risk. These risks include the market risk (including currency, interest rate, oil price fluctuation and price), credit risk and liquidity risk.

These risks include the market risk (including currency risk, interest rate risk, oil price fluctuation risk and price risk), credit risk and liquidity risk.

The Group tries to minimize the impact of these risks by using derivative instruments for risk aversion. Use of derivatives is determined on the basis of the policy of the Group approved by the board of directors, but, by this, documented principles about foreign exchange risk, interest rate risk, credit risk, use of non-derivative financial instruments and derivative financial instruments, and the investment of excess liquidity are provided. Internal auditor reviews the compliance with the policy and limitations of risk consistently. The Group does not make and transact the financial instrument contract, including derivatives, for speculative purposes.

The finance division reports quarterly to the Risk Management Committee, an independent organization that monitors policies and risks to mitigate risk exposure.

(3) Market risk

The Group is mainly exposed to financial risks, such as foreign exchange rate, interest rate and oil price. Therefore, the Group made a contract for derivative instruments.

1) Foreign exchange risk management

The Group is exposed to various foreign currency risks since it makes transactions in foreign currencies. By using the currency option contracts, The Group manages the degree of risk exposure due to the changes in exchange rates within the limit decided in the policy that has been approved.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities as of December 31, 2018 and 2017, are as follows:

	Korean won			
	Assets		Liabilities	
	2018	2017	2018	2017
	(In millions)			
USD	₩ 1,368,381	₩ 930,282	₩ 8,095,728	₩ 8,003,911
JPY	126,198	230,920	955,538	792,610
Others	339,380	365,156	1,650,958	1,344,067
	₩ 1,833,959	₩ 1,526,358	₩ 10,702,224	₩ 10,140,588

	Translation into U.S. dollars (Note 2)			
	Assets		Liabilities	
	2018	2017	2018	2017
	(In thousands)			
USD	$ 1,223,845	$ 832,020	$ 7,240,612	$ 7,158,493
JPY	112,869	206,529	854,609	708,890
Others	303,533	326,586	1,476,574	1,202,100
	$ 1,640,247	$ 1,365,135	$ 9,571,795	$ 9,069,483

a. Foreign currency sensitivity analysis

The Group is mainly exposed to the risk on USD, JPY and other currencies (EUR, CNY and others).

The Group's sensitivity to a 10% increase or 10% decrease and in Korean won (functional currency of the Group) against the foreign currencies as of December 31, 2018 and 2017, are presented in the table below. The sensitivity rate used in reporting foreign currency risk internally to key management personnel is 10% and it represents management's assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency-denominated monetary items and adjusts their translation at the period-end for a 10% change in foreign currency rates. A positive number below indicates an increase in income (loss) before income tax expense and other equity where the Korean won is strengthening 10% against the relevant currency. For a 10% weakness of Korean won against the relevant currency, there would be an equal and opposite impact on the income (loss) before income tax expense and other equity.

	Korean won					
	USD		JPY		Others	
	2018	2017	2018	2017	2018	2017
	(In millions)					
Net income before income tax expense (*)	₩ 672,735	₩ 707,363	₩ 82,934	₩ 56,169	₩ 131,158	₩ 97,891

	Translation into U.S. dollars (Note 2)					
	USD		JPY		Others	
	2018	2017	2018	2017	2018	2017
	(In thousands)					
Net income before income tax expense	$ 601,677	$ 632,647	$ 74,174	$ 50,236	$ 117,304	$ 87,551

(*)Increase (decrease) is mainly due to exchange rate fluctuations of USD and JPY currency receivables and payables as of December 31, 2018 and 2017.

2) Interest risk management

The Group has borrowed funds on fixed and floating interest rates; therefore, the Group is exposed to interest rate risk. In order to manage interest rate risk, the Group maintains a proper balance between floating-rate borrowings and fixed-rate borrowings, or the Group enters into interest rate swap contracts. In order to appropriately adjust to situation of interest and the defined tendency of risk, the risk aversion activity is evaluated periodically and optimal hedging strategy is applied.

The exposure degree of interest rate risk for financial assets and liabilities is described in more detail in the footnotes of liquidity risk management.

a. Interest sensitivity analysis

The sensitivity analyses above have been determined based on the exposure to interest rates for both derivative and non-derivative instruments at the end of the reporting period. For floating-rate financial assets and liabilities, the analysis is prepared assuming the amount of the financial assets and liabilities outstanding at the end of the reporting period was outstanding for whole year. The sensitivity rate used in reporting interest risk internally to key management personnel is 50 basis points and it represents management's assessment of the reasonable possible change in interest rates.

The Group's sensitivity to a 50 basis points change in interest rates on net income when all other variables are fixed as of December 31, 2018 and 2017, are as follows:

- The Group's net loss will increase (decrease) to ₩42 million ($38 thousand) (prior year ₩45 million ($40 thousand)), and it is mainly due to the interest rate risk of floating rate borrowings.

The interest rate sensitivity of the Group has decreased due to the decrease in floating-rate borrowings for the year ended December 31, 2018.

b. Interest rate swap contracts

On the basis of the interest rate swap agreement, the Group will exchange the balance that is calculated by applying the difference between fixed-rate and floating rate interest of the nominal principal that is determined in advance. These contracts will reduce the risk of changes in fair value of the fixed-rate liabilities and cash flows of floating rate liabilities with the Group attributable to changes in interest rates. The fair value of the interest rate swap is determined by discounting the future cash flows estimated using the credit risk that is inherent in the contract with the yield curve as of December 31, 2018, and it is disclosed in the following table. The average interest rate is determined based on the outstanding balance as of December 31, 2018.

The interest rate swap outstanding that pays fixed interest and receives variable interest as of December 31, 2018 and 2017, are as follows:

2018

		Korean won				
Classification	Average contracted fixed rate (%)	Contract amount			Fair value	
					(In millions)	
For trading						
Within one year	1.79	EUR	90,000	thousand	₩	(38)
	3.27	JPY	2,163,525	thousand		(2,281)
More than one year	2.57	JPY	46,320,209	thousand		1,226
	4.88	EUR	266,904	thousand		(14,110)
	2.40	KRW	1,127,244,844	thousand		(14,068)

		Translation into U.S. dollars (Note 2)				
Classification	Average contracted fixed rate (%)	Contract amount			Fair value	
					(In thousands)	
For trading						
Within one year	1.79	EUR	90,000	thousand	$	(34)
	3.27	JPY	2,163,525	thousand		(2,040)
More than one year	2.57	JPY	46,320,209	thousand		1,097
	4.88	EUR	266,904	thousand		(12,620)
	2.40	KRW	1,127,244,844	thousand		(12,582)

2017

		Korean won				
Classification	Average contracted fixed rate (%)	Contract amount			Fair value	
					(In millions)	
For trading						
Within one year	1.84	EUR	100,000	thousand	₩	(42)
More than one year	1.79	EUR	90,000	thousand		(3)
	2.22	JPY	23,629,129	thousand		(15,122)
	4.88	EUR	266,904	thousand		(30,057)
	1.89	KRW	643,172,196	thousand		(23,884)

		Translation into U.S. dollars (Note 2)				
Classification	Average contracted fixed rate (%)	Contract amount			Fair value	
					(In thousands)	
For trading						
Within one year	1.84	EUR	100,000	thousand	$	(37)
More than one year	1.79	EUR	90,000	thousand		(2)
	2.22	JPY	23,629,129	thousand		(13,525)
	4.88	EUR	266,904	thousand		(26,883)
	1.89	KRW	643,172,196	thousand		(21,362)

3) Risk of changes in oil prices

Market prices of oil products, such as jet fuel, have fluctuated greatly due to various factors that affect the supply and demand of crude oil in the world market. These factors will affect the cash flow and performance of air transportation business, which is the largest business segment of the Group.

The effect of 10% change in oil price on operating income (loss) for the years ended December 31, 2018 and 2017, are as follows:

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	Korean won							
	2018				2017			
	Increase by 10%		Decrease by 10%		Increase by 10%		Decrease by 10%	
	(In millions)							
Operating income (loss)	₩	(328,305)	₩	328,305	₩	(260,278)	₩	260,278

	Translation into U.S. dollars (Note 2)							
	2018				2017			
	Increase by 10%		Decrease by 10%		Increase by 10%		Decrease by 10%	
	(In thousands)							
Operating income (loss)	$	(293,628)	$	293,628	$	(232,786)	$	232,786

4) Other price risk

The Group is exposed to price risk arising from equity instruments. The Group holds equity instruments for a strategic purpose and not for trading, and has not actively traded the investment assets.

a. Stock price sensitivity analysis

The following sensitivity analysis is based on the current stock price fluctuation risk as of December 31, 2018 and 2017.

The effect of 5% change in stock price is as follows:
- The Group's other comprehensive income (loss) will increase (decrease) to ₩4,994 million ($4,467 thousand) (prior year ₩6,393 million ($5,718 thousand)), and it is due to the change of the Listed and Unlisted securities classified as fair value of financial assets at FVTOCI

The methods and assumptions used in preparing the sensitivity analysis above have not changed significantly from the prior year.

(4) Credit risk management

The measurement standards used to estimate the maximum exposures and expected credit losses for the Group's credit risk are described in 2) below.

In order to minimize credit risk, the Group has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral, where appropriate, as a means of mitigating the risk of financial loss from defaults. The Group has adopted a policy to receive adequate collateral. The Group has traded only with companies that received a credit rating that is applicable to investment grade and above. This credit information is provided by independent credit-rating agencies. If the Group is not able to use information that credit-rating agency provided, the Group uses another financial information and trading performance, which officially announces for the purpose of the Group to determine the credit rating of major customers. The Group has reviewed the exposure of credit risk and credit rating of customers consistently, and transaction amounts are distributed to the approved customers.

Credit approvals and other monitoring procedures are also in place to ensure that follow-up action is taken to recover overdue debts. Furthermore, the Group reviews the recoverable amount of each trade debt and debt investment on an individual basis at the end of the reporting period to ensure that adequate loss allowance is made for irrecoverable amounts. In this regard, the directors of the Group consider that the Group's credit risk is significantly reduced. The trade receivables consist of many suppliers and distributors in various regions. The credit evaluation about the trade receivables has been carried out consistently, and where appropriate, credit guarantee insurance cover is purchased.

The credit risk on liquidity funds and derivatives is limited because the counterparty is a bank with a high credit rating by an international rating agency.

1) Collateral held as security and other credit enhancements

The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets, except the credit risk associated with finance lease receivables. The carrying amount of finance lease receivables amounts to ₩128,963 million ($115,341 thousand) (prior year ₩157,030 million ($140,444 thousand)) and the fair value of the leased assets is estimated to be approximately ₩273,375 million ($244,500 thousand) (prior year ₩270,314 million ($241,762 thousand)). The Group is not permitted to sell or repledge the collateral in the absence of default by the lessee. There has not been any significant changes in the quality of the collateral held for finance lease receivables. The Group has not recognized a loss allowance for the finance lease receivables as a result of these collaterals.

2) The Group's exposure to credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. As of December 31, 2018, the Group's maximum exposure to credit risk without taking into account any collateral held or other credit enhancements, which will cause a financial loss to the Group due to failure to discharge an obligation by the counterparties and financial guarantees provided by the Group, arises from:

- The carrying amount of the respective recognized financial assets as stated in the consolidated financial statement of financial position; and
- The maximum amount the entity would have to pay if the financial guarantee is called upon, irrespective of the likelihood of the guarantee being exercised

The credit rating information is supplied by independent rating agencies where available and, if not available, the Group uses other publicly available financial information and its own trading records to rate its major customers. The Group's exposure and the credit ratings of its counterparties are continuously monitored and the aggregate value of transactions concluded is spread among approved counterparties.

The maximum amount of exposure to credit risk as of December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Financial guarantee contract (*)	₩ 273,632	₩ 129,639	$ 244,729	$ 115,946

(*) Amount of financial guarantee contract represents a limit of payment guarantee, which is the maximum amount payable by the Group in case the debtor claims for the full guaranteed amount.

The carrying amounts of the financial assets exposed to credit risk, which is not in the table above, are excluded from the above disclosure because the book value of financial assets represents the maximum amount of exposure to credit risk.

(5) Liquidity risk management

The board of directors to formulate the basic policy for financing the Group's short-term and long-term funds and managing liquidity management regulations has ultimate responsibility for liquidity risk management. The Group manages liquidity risk by maintaining the sufficient reserves and borrowing limit, observing the predicted and actual cash flows and matching the maturity structure of financial assets and financial liabilities.

1) Details related to liquidity and interest rate risk

The following table shows the contractual maturity of the Group's non-derivative financial liabilities. The table is formed based on the earliest maturity date on which the Group has to pay on the basis of the cash flows of the financial liabilities that are not discounted, and the cash flows include both the principal and interest. If the interest on cash flows are based on a floating interest rate, cash flows that are not discounted have been derived based on the yield curve at the end of the reporting period. The maturity analysis is based on the earliest maturity date on which the Group can be required to pay.

2018

Classification	Korean won			
	Within 1 year	1–5 years	More than 5 years	Total
	(In millions)			
Trade and other payables	₩ 947,806	₩ 3,905	₩ -	₩ 951,711
Finance lease obligations	1,370,295	4,610,302	2,305,607	8,286,204
Borrowings	2,601,796	3,455,415	360,195	6,417,406
Debentures	871,409	1,606,739	-	2,478,148
	₩ 5,791,306	₩ 9,676,361	₩ 2,665,802	₩ 18,133,469

Classification	Translation into U.S. dollars (Note 2)			
	Within 1 year	1–5 years	More than 5 years	Total
	(In thousands)			
Trade and other payables	$ 847,693	$ 3,493	$ -	$ 851,186
Finance lease obligations	1,225,556	4,123,336	2,062,076	7,410,968
Borrowings	2,326,979	3,090,435	322,149	5,739,563
Debentures	779,367	1,437,026	-	2,216,393
	$ 5,179,595	$ 8,654,290	$ 2,384,225	$ 16,218,110

2017

Classification	Korean won			
	Within 1 year	1–5 years	More than 5 years	Total
	(In millions)			
Trade and other payables	₩ 1,057,907	₩ 5,249	₩ -	₩ 1,063,156
Finance lease obligations	1,345,083	4,380,269	2,524,880	8,250,232
Borrowings	2,170,100	2,430,238	772,306	5,372,644
Debentures	795,205	1,116,671	-	1,911,876
	₩ 5,368,295	₩ 7,932,427	₩ 3,297,186	₩ 16,597,908

Classification	Translation into U.S. dollars (Note 2)			
	Within 1 year	1–5 years	More than 5 years	Total
	(In thousands)			
Trade and other payables	$ 946,165	$ 4,695	$ -	$ 950,860
Finance lease obligations	1,203,007	3,917,601	2,258,188	7,378,796
Borrowings	1,940,882	2,173,542	690,731	4,805,155
Debentures	711,211	998,722	-	1,709,933
	$ 4,801,265	$ 7,094,560	$ 2,948,919	$ 14,844,744

The following table shows the expected maturity of the Group’s non-derivative financial assets, and the table is formed based on the contractual maturity amount of the financial assets that are not discounted. In order to understand the liquidity risk management of the Group, the information about the non-derivative financial assets has to be included because the Group manages the liquidity based on the net assets and net liabilities.

2018

Classification	Within 1 year	1–5 years	More than 5 years	Total
	Korean won			
	(In millions)			
Cash and cash equivalents	₩ 1,503,951	₩ -	₩ -	₩ 1,503,951
Short- and long-term financial instruments	236,731	1,650	3	238,384
Finance lease receivables	29,634	99,329	-	128,963
Trade and other receivables	844,155	40	-	844,195
Financial assets at FV	35	281	9	325
Other financial assets	10	-	210,852	210,862
	₩ 2,614,516	₩ 101,300	₩ 210,864	₩ 2,926,680

Classification	Within 1 year	1–5 years	More than 5 years	Total
	Translation into U.S. dollars (Note 2)			
	(In thousands)			
Cash and cash equivalents	$ 1,345,096	$ -	$ -	$ 1,345,096
Short- and long-term financial instruments	211,726	1,476	2	213,204
Finance lease receivables	26,504	88,837	-	115,341
Trade and other receivables	754,990	36	-	755,026
Financial assets at FV	31	251	9	291
Other financial assets	9	-	188,580	188,589
	$ 2,338,356	$ 90,600	$ 188,591	$ 2,617,547

2017

Classification	Within 1 year	1 year–5 years	More than 5 years	Total
	Korean won			
	(In millions)			
Cash and cash equivalents	₩ 761,235	₩ -	₩ -	₩ 761,235
Short- and long-term financial instruments	510,546	5,579	3	516,128
Finance lease receivables	61,156	95,874	-	157,030
Trade and other receivables	757,013	50	-	757,063
AFS financial assets	-	6	202,163	202,169
Held-to-maturity financial assets	718	309	10	1,037
Other financial assets	15	124,947	216,106	341,068
	₩ 2,090,683	₩ 226,765	₩ 418,282	₩ 2,735,730

Classification	Within 1 year	1 year–5 years	More than 5 years	Total
	Translation into U.S. dollars (Note 2)			
	(In thousands)			
Cash and cash equivalents	$ 680,829	$ -	$ -	$ 680,829
Short- and long-term financial instruments	456,619	4,990	2	461,611
Finance lease receivables	54,697	85,747	-	140,444
Trade and other receivables	677,053	45	-	677,098
AFS financial assets	-	6	180,809	180,815
Held-to-maturity financial assets	643	276	9	928
Other financial assets	13	111,750	193,279	305,042
	$ 1,869,854	$ 202,814	$ 374,099	$ 2,446,767

The amount of the floating rate instruments (non-derivative financial assets and liabilities) contained in the table above may be changed if the changes in floating interest rates are different from the determined estimate rate at the end of the reporting period.

The table below shows in detail the breakdown of the liquidity analysis of derivative financial instruments based on contractual maturities. The amount of the derivative instruments that are settled in net amounts is based on undiscounted net cash inflows and outflows in accordance with the terms of the contract, and that of the derivative instruments that are settled in gross amounts is based on undiscounted total cash inflows and outflows. In case the amounts to be received or paid are not settled, an interest rate estimated based on the yield curve at the end of the reporting period is used.

2018

Classification	Korean won		
	Within 1 year	1–2 years	More than 2 years
		(In millions)	
Net settlement:			
Oil price option	₩ (7,901)	₩ (5,129)	₩ -
Gross settlement:			
Interest rate swaps:			
Inflows	₩ 437,151	₩ 665,704	₩ 1,007,403
Outflows	(410,641)	(676,672)	(1,051,076)
	₩ 18,609	₩ (16,097)	₩ (43,673)

Classification	Translation into U.S. dollars (Note 2)		
	Within 1 year	1–2 years	More than 2 years
		(In thousands)	
Net settlement:			
Oil price option	$ (7,066)	$ (4,587)	$ -
Gross settlement:			
Interest rate swaps:			
Inflows	$ 390,977	$ 595,389	$ 900,996
Outflows	(367,267)	(605,198)	(940,055)
	$ 16,644	$ (14,396)	$ (39,059)

2017

Classification	Korean won		
	Within 1 year	1–2 years	More than 2 years
		(In millions)	
Net settlement:			
Oil price option	₩ 126	₩ -	₩ -
Gross settlement:			
Interest rate swaps:			
Inflows	₩ 166,360	₩ 145,748	₩ 985,571
Outflows	(165,841)	(142,210)	(1,018,797)
	₩ 645	₩ 3,538	₩ (33,226)

Classification	Translation into U.S. dollars (Note 2)		
	Within 1 year	1–2 years	More than 2 years
		(In thousands)	
Net settlement:			
Oil price option	$ 112	$ -	$ -
Gross settlement:			
Interest rate swaps:			
Inflows	$ 148,789	$ 130,354	$ 881,469
Outflows	(148,324)	(127,189)	(911,186)
	$ 577	$ 3,165	$ (29,717)

(6) Capital risk management

The Group manages its capital in order to maintain the ability to continuously provide profits to its shareholders and interest parties and optimum capital structure to reduce capital expenses. In order to maintain such optimum, The Group adjusts dividend payments, redeems paid-in capital to shareholders and issues stocks to reduce liabilities or sell assets.

Like other entities in the field in which the Group operates, the Group manages its capital based on the ratio of net debt to total equity. Net debt refers to total borrowings (including obligation under finance leases as presented in the consolidated statements of financial position), less cash and cash equivalents and short-term financial assets, and total equity refers to capital presented in the consolidated statements of financial position, plus net debt.

The Group's net debt to total equity ratio as of December 31, 2018 and 2017 are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Total borrowings	₩ 15,739,200	₩ 14,845,341	$ 14,076,737	$ 13,277,293
Less cash and cash equivalents and short-term financial instruments	1,740,682	1,271,781	1,556,821	1,137,448
Net debt	13,998,518	13,573,560	12,519,916	12,139,845
Capital	3,031,782	3,751,104	2,711,549	3,354,891
Total equity	₩ 17,030,300	₩ 17,324,664	$ 15,231,465	$ 15,494,736
Net debt to total equity ratio	82.20%	78.35%	82.20%	78.35%

40. TRANSACTIONS AND BALANCES WITH RELATED PARTIES:

(1) The list of related parties of the Group as of December 31, 2018, is as follows:

Relationship	Related parties
Significant influence over the Group	Hanjin Kal Co., Ltd.
Associates (*1)	Hanjin Int'l Japan Co., Ltd.
Other related parties	Jin Air Co., Ltd., KAL Hotel Network Co., Ltd., Topas Co., Ltd., Jungseok Enterprise Co., Ltd., Hanjin Travel Service Co., Ltd., Jedong Leisure Co., Ltd., Waikiki Resort Hotel Inc., etc.
Affiliated companies of a conglomerate and others (*2)	Hanjin Transportation Co., Ltd., Jungseok-Inha School's Foundation, TAE IL CO., LTD., The Third Terminal of Incheon Port Operating Co. Ltd., Jungseok Logistics Foundation, Pyeongtaek Container Terminal Co., Ltd., Pohang Port 7th Terminal Operating Co., LTD., WAC INTERNATIONAL LOGISTICS CO., LTD., HANJIN INCHEON CONTAINER TERMINAL CO.,LTD., Taeil Catering Co., Ltd., HANJIN ULSAN NEWPORT OPERATION CO., LTD., Chungwon Freez Co., Ltd., etc.

(*1) For the year ended December 31, 2018, The Group sold the shares of Czech Airlines j.s.c. and excluded it from investments in associates, and reclassified EIGHT CITY Co., Ltd. to FVTOCI financial assets as it showed no sign of business activity or rehabilitation.

(*2) These companies are not related parties as defined in paragraph 9 of K-IFRS 1024. However, affiliated companies of a conglomerate and others designated by the Fair Trade Commission are classified as related parties. In addition, TAE IL Co., Ltd., and ten other companies are added for the year ended December 31, 2018.

(2) Significant transactions with related parties (except for treasury and equity transactions) for the year ended December 31, 2018 and 2017, are as follows:

2018

Description		Korean won			
		Sales and others		Purchases and others	
		(In millions)			
Significant influence over the Group	Hanjin Kal Co., Ltd.	₩	310	₩	41,681
Associates	Hanjin Int'l Japan Co., Ltd.		-		21,508
	Czech Airlines j.s.c. (*1)		3,464		2,702
Other related parties	Jin Air Co., Ltd.		284,352		3,825
	KAL Hotel Network Co., Ltd.		24,427		44,929
	Topas Co., Ltd.		8,097		35
	Jungseok Enterprise Co., Ltd.		367		2,493
	Hanjin Travel Service Co., Ltd.		1,233		4,158
	Others		16		2,966
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.		13,776		43,335
	Jungseok-Inha School's Foundation		6,160		7,655
	Others (*2)		3,125		31,916

Description		Translation into U.S. dollars (Note 2)			
		Sales and others		Purchases and others	
		(In thousands)			
Significant influence over the Group	Hanjin Kal Co., Ltd.	$	277	$	37,278
Associates	Hanjin Int'l Japan Co., Ltd.		-		19,236
	Czech Airlines j.s.c. (*1)		3,098		2,417
Other related parties	Jin Air Co., Ltd.		254,318		3,421
	KAL Hotel Network Co., Ltd.		21,847		40,183
	Topas Co., Ltd.		7,242		32
	Jungseok Enterprise Co., Ltd.		328		2,230
	Hanjin Travel Service Co., Ltd.		1,103		3,719
	Others		15		2,653
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.		12,321		38,758
	Jungseok-Inha School's Foundation		5,510		6,846
	Others (*2)		2,795		28,545

(*1) It is including the transactions occurred before Czech Airlines j.s.c. was sold and for the year ended December 31, 2018.

(*2) Transactions between companies excluding Hanjin Transportation Co., Ltd. and Jungseok-Inha School's Foundation, classified as 'Affiliated companies of a conglomerate and others' in (1), are included.

2017

Description		Korean won	
		Sales and others	Purchases and others
		(In millions)	
Significant influence over the Group	Hanjin Kal Co., Ltd.	₩ 410	₩ 31,754
Associates and jointly controlled entities	Czech Airlines j.s.c.	23,343	20,199
	Others	4	5,527
Other related parties	Jin Air Co., Ltd.	276,954	4,409
	KAL Hotel Network Co., Ltd.	25,135	36,284
	Topas Co., Ltd.	7,899	53
	Jungseok Enterprise Co., Ltd.	285	2,279
	Hanjin Travel Service Co., Ltd.	1,336	4,565
	Others	24	2,908
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	14,183	41,597
	Jungseok-Inha School's Foundation	9	7,904
	Others (*)	6,606	38,927

Description		Translation into U.S. dollars (Note 2)	
		Sales and others	Purchases and others
		(In thousands)	
Significant influence over the Group	Hanjin Kal Co., Ltd.	$ 366	$ 28,400
Associates and jointly controlled entities	Czech Airlines j.s.c.	20,877	18,065
	Others	3	4,943
Other related parties	Jin Air Co., Ltd.	247,701	3,944
	KAL Hotel Network Co., Ltd.	22,480	32,452
	Topas Co., Ltd.	7,065	47
	Jungseok Enterprise Co., Ltd.	255	2,038
	Hanjin Travel Service Co., Ltd.	1,195	4,082
	Others	21	2,601
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	12,684	37,203
	Jungseok-Inha School's Foundation	8	7,069
	Others (*)	5,908	34,815

(*) It is including the transactions for the year ended December 31, 2017, with Hanjin Shipping Co., Ltd., which was declared bankrupt on February 17, 2017, and Uniconverse Co., Ltd., which was incorporated in the Group on August 14, 2017, and merged by the Group on November 1, 2017, excluding Hanjin Transportation Co. Ltd. and Jungseok-Inha School's Foundation, classified as 'Affiliated companies of a conglomerate and others' in (1).

(3) Significant receivables from and payables to the related parties (except for loan and borrowing transactions) as of December 31, 2018, and December 31, 2017, are as follows:

2018

Description		Korean won	
		Trade and other receivables	Trade and other payables
		(In millions)	
Significant influence over the Group	Hanjin Kal Co., Ltd.	₩ 2,295	₩ 7,565
Other related parties	Jin Air Co., Ltd.	49,640	45,068
	KAL Hotel Network Co., Ltd.	4,309	5,090
	Topas Co., Ltd.	872	1,150
	Jungseok Enterprise Co., Ltd.	703	11,474
	Hanjin Travel Service Co., Ltd.	349	1,025
	Others	3	939
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	2,206	7,346
	Others (*)	762	4,670

Description		Translation into U.S. dollars (Note 2)	
		Trade and other receivables	Trade and other payables
		(In thousands)	
Significant influence over the Group	Hanjin Kal Co., Ltd.	$ 2,052	$ 6,766
Other related parties	Jin Air Co., Ltd.	44,397	40,307
	KAL Hotel Network Co., Ltd.	3,854	4,552
	Topas Co., Ltd.	780	1,028
	Jungseok Enterprise Co., Ltd.	629	10,262
	Hanjin Travel Service Co., Ltd.	312	917
	Others	3	840
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.	1,973	6,570
	Others (*)	682	4,177

(*) Receivables from and payables to the related parties between companies excluding Hanjin Transportation Co. LTD. and Jungseok-Inha School's Foundation, classified as 'Affiliated companies of a conglomerate and others' in (1), are included.

2017

Description		Korean won			
		Trade and other receivables		Trade and other payables	
		(In millions)			
Significant influence over the Group	Hanjin Kal Co., Ltd.	₩	2,372	₩	7,140
Associates	Czech Airlines j.s.c.		1,329		18,426
	Others		-		4,148
Other related parties	Jin Air Co., Ltd.		62,500		41,961
	KAL Hotel Network Co., Ltd.		4,598		3,576
	Topas Co., Ltd.		703		1,135
	Jungseok Enterprise Co., Ltd.		620		4,424
	Hanjin Travel Service Co., Ltd.		271		1,507
	Others		3		1,012
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.		2,529		7,102
	Others (*)		1,907		6,384

Description		Translation into U.S. dollars (Note 2)			
		Trade and other receivables		Trade and other payables	
		(In thousands)			
Significant influence over the Group	Hanjin Kal Co., Ltd.	$	2,121	$	6,386
Associates	Czech Airlines j.s.c.		1,189		16,480
	Others		-		3,710
Other related parties	Jin Air Co., Ltd.		55,899		37,529
	KAL Hotel Network Co., Ltd.		4,112		3,198
	Topas Co., Ltd.		629		1,015
	Jungseok Enterprise Co., Ltd.		554		3,957
	Hanjin Travel Service Co., Ltd.		243		1,348
	Others		3		905
Affiliated companies of a conglomerate and others	Hanjin Transportation Co., Ltd.		2,262		6,352
	Others (*)		1,705		5,710

(*) Receivables from and payables to the related parties between companies excluding Hanjin Transportation Co. LTD. and Jungseok-Inha School's Foundation, classified as 'Affiliated companies of a conglomerate and others' in (1), are included.

(4) There was no stock trading with related parties for the year ended December 31, 2017. Loan and borrowing transactions with related parties for the year ended December 31, 2018, are as follows:

2018

Description	Account	Korean won			
		Beginning balance	Increase	Decrease	Ending balance
			(In millions)		
Affiliated companies of a conglomerate and others:					
Shareholder executive	Short-term loans	₩ -	₩ 3,000	₩ (3,000)	₩ -

Description	Account	Translation into U.S. dollars (Note 2)			
		Beginning balance	Increase	Decrease	Ending balance
			(In thousands)		
Affiliated companies of a conglomerate and others:					
Shareholder executive	Short-term loans	$ -	$ 2,683	$ (2,683)	$ -

The Group issued and paid the Short-term loans for temporary purpose and the Group accordingly recognized interest income of ₩15,066 million ($13,475 thousand) for the years ended December 31, 2018.

(5) There was no stock trading with related parties for the year ended December 31, 2018. Stock trading with related parties for the years ended December 31, 2017, is as follows:

2017

Description		Transaction	Korean won	Translation into U.S. dollars (Note 2)
			(In millions)	(In thousands)
Capital increase	Hanjin KAL Co., Ltd. (*Significant influence over the Group)*	Participation in paid-in capital increase	₩ 113,523	$ 101,532
	Jungseok-Inha School's Foundation *(Affiliated companies of a conglomerate and others)*	Participation in paid-in capital increase	5,234	4,681
Equity contribution	Members of the key management personnel (*Other related parties*)	Receipt of equity shares without consideration	36,342	32,503

(6) The remuneration of registered directors and unregistered directors for the year ended December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Wages and salaries	₩ 4,540	₩ 4,123	$ 4,061	$ 3,687
Retirement benefit costs	2,614	2,127	2,337	1,903
	₩ 7,154	₩ 6,250	$ 6,398	$ 5,590

41. OPERATING LEASE:

(1) Breakdown of the usage of an operating lease

As of December 31, 2018, the Group has entered into operating lease agreements to lease 26 aircraft and certain aircraft parts from Air Lease Corporation and other lessors. The Group has also entered into an operating lease agreement to use the cargo terminal at JFK International Airport located in the United States with the New York City Industrial Development Agency ("IDA"). The schedule of lease payments as of December 31, 2018, is summarized as follows:

Period	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Less than one year	₩ 266,143	$ 238,031
One year to five years	928,273	830,224
More than five years	620,704	555,141
	₩ 1,815,120	$ 1,623,396

Also, the Group has entered into operating lease agreements to lease business computing equipment from Macquarie Finance Korea Ltd. and others. The schedule of lease payments as of December 31, 2018, is as follows:

Period	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Less than one year	₩ 273	$ 244
One year to five years	255	228
	₩ 528	$ 472

(2) Breakdown of the provision of an operating lease

The Group has entered into operating lease agreements to lease 15 aircraft and certain aircraft parts to Jin Air Co., Ltd. and others. The schedule of lease collection on this agreement is summarized as follows:

Period	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Less than one year	₩ 80,499	$ 71,996
One year to five years	238,067	212,921
More than five years	38,087	34,064
	₩ 356,653	$ 318,981

Furthermore, the Group has entered into operating lease agreements to lease data processing equipment to LG Sports Ltd., KAL Hotel Network Co., Ltd. and others. The schedule of lease collection on this agreement is summarized as follows:

Period	Korean won	Translation into U.S. dollars (Note 2)
	(In millions)	(In thousands)
Less than one year	₩ 9,478	$ 8,477
One year to five years	6,335	5,665
	₩ 15,813	$ 14,142

42. CASH FLOWS:

(1) The significant non-cash transactions from investing and financing activities that are not included in the consolidated statements of cash flows for the years ended December 31, 2018 and 2017, are as follows:

Description	Korean won			
	2018		2017	
	(In millions)			
Transfer of long-term borrowings to current portion of long-term borrowings	₩	1,486,802	₩	247,807
Transfer of debentures to current portion of debentures		719,966		268,411
Transfer of finance lease obligations to current portion of finance lease obligations		1,250,640		536,138
Transfer of construction in progress to property, aircraft and equipment		2,418,448		3,422,613
Acquisition of finance lease assets		1,077,254		1,105,135
Transfer of finance lease obligations to finance lease receivables		-		137,984
Transfer of voluntary reserves to deficit		-		200,000

Description	Translation into U.S. dollars (Note 2)			
	2018		2017	
	(In thousands)			
Transfer of long-term borrowings to current portion of long-term borrowings	$	1,329,758	$	221,632
Transfer of debentures to current portion of debentures		643,919		240,060
Transfer of finance lease obligations to current portion of finance lease obligations		1,118,541		479,508
Transfer of construction in progress to property, aircraft and equipment		2,162,998		3,061,097
Acquisition of finance lease assets		963,468		988,404
Transfer of finance lease obligations to finance lease receivables		-		123,410
Transfer of voluntary reserves to deficit		-		178,875

(2) Changes in liabilities from financial activities for the year ended December 31, 2018 is as follows:

2018

Description	Beginning balance	Cash flows from financing activities	Effect of exchange rate changes	Finance lease	Others(*)	Ending balance
	Korean won					
			Changes from non-cash transactions			
			(In millions)			
Short-term borrowings	₩ 772,625	₩ (124,725)	₩ 10,938	₩ -	₩ 73,473	₩ 732,311
Short-term debentures	69,924	(70,000)	-	-	76	-
Current portion of long-term borrowings	2,122,133	(2,084,364)	-	-	2,385,540	2,423,309
Current portion of finance leases obligations	1,178,332	(1,264,366)	-	520	1,251,072	1,165,558
Long-term borrowings	1,941,915	1,019,177	71,245	-	(658,704)	2,373,633
Debentures	1,102,989	1,161,185	40,663	-	(785,878)	1,518,959
ABS loans	1,260,629	749,700	8,317	-	(814,264)	1,204,382
Finance lease obligations	6,396,796	-	294,694	1,064,487	(1,434,930)	6,321,047

Description	Beginning Balance	Cash flows from financing activities	Effect of exchange rate changes	Finance lease	Others(*)	Ending balance
	Translation into U.S. dollars (Note 2)					
			Changes from non-cash transactions			
			(In thousands)			
Short-term borrowings	$ 691,016	$ (111,551)	$ 9,783	$ -	$ 65,712	$ 654,960
Short-term debentures	62,538	(62,606)	-	-	68	-
Current portion of long-term borrowings	1,897,981	(1,864,202)	-	-	2,133,566	2,167,345
Current portion of finance leases obligations	1,053,870	(1,130,817)	-	465	1,118,928	1,042,446
Long-term borrowings	1,736,799	911,526	63,719	-	(589,127)	2,122,917
Debentures	986,485	1,038,534	36,368	-	(702,869)	1,358,518
ABS loans	1,127,474	670,512	7,439	-	(728,256)	1,077,169
Finance lease obligations	5,721,130	-	263,567	952,050	(1,283,365)	5,653,382

(*) Other increase or decrease is mainly due to the transfer of current portion, recognition and payment of interest expenses.

2017

Description	Korean won					
			Changes from non-cash transactions			
	Beginning balance	Cash flows from financing activities	Effect of exchange rate changes	Finance lease	Others(*)	Ending balance
			(In millions)			
Short-term borrowings	₩ 1,167,972	₩ (310,828)	₩ (38,905)	₩ -	₩ (45,614)	₩ 772,625
Short-term debentures	336,230	(261,877)	-	-	(4,429)	69,924
Current portion of long-term borrowings	3,460,677	(1,740,142)	(16,610)	-	418,207	2,122,132
Current portion of finance leases obligations	1,714,470	(1,712,002)	-	-	1,175,865	1,178,333
Long-term borrowings	1,016,089	1,531,779	(148,586)	-	(457,367)	1,941,915
Debentures	83,169	127,846	(27,534)	-	919,508	1,102,989
ABS loans	1,731,952	504,665	(60,810)	-	(915,177)	1,260,630
Finance lease obligations	6,774,326	529,170	(835,971)	356,472	(427,201)	6,396,796

Description	Translation into U.S. dollars (Note 2)					
			Changes from non-cash transactions			
	Beginning Balance	Cash flows from financing activities	Effect of exchange rate changes	Finance lease	Others(*)	Ending balance
			(In thousands)			
Short-term borrowings	$ 1,044,604	$ (277,997)	$ (34,796)	$ -	$ (40,795)	$ 691,016
Short-term debentures	300,716	(234,216)	-	-	(3,962)	62,538
Current portion of long-term borrowings	3,095,141	(1,556,338)	(14,855)	-	374,033	1,897,981
Current portion of finance leases obligations	1,533,378	(1,531,171)	-	-	1,051,663	1,053,870
Long-term borrowings	908,764	1,369,984	(132,891)	-	(409,058)	1,736,799
Debentures	74,384	114,342	(24,626)	-	822,385	986,485
ABS loans	1,549,013	451,359	(54,387)	-	(818,511)	1,127,474
Finance lease obligations	6,058,783	473,276	(747,671)	318,819	(382,077)	5,721,130

(*) Other increase or decrease is mainly due to the transfer of current portion, recognition and payment of interest expenses.

43. COMMITMENTS AND CONTINGENCIES:

(1) The guarantees provided as of December 31, 2018, are as follows (in millions of Korean won and in thousands of U.S. dollars):

Financial institution	Currency	Guaranteed amount	Details
Seoul Guarantee Insurance Co., Ltd.	KRW	11,146	Bids, performance, maintenance and others
Korea Defense Industry Association	KRW	999,554	
HSBC Australia and others	KRW	22,245	
Engineering Financial Cooperative	KRW	36,473	
Korea Software Financial Cooperative	KRW	9,605	
Information & Communication Financial Cooperative	KRW	95	
BBCN BANK	USD	4,146	

As of December 31, 2018, the Group has been provided with a payment guarantee (limit: USD 3,000 thousand) for the purchase of facilities from Hana Bank. Also, the Group has been provided with a guarantee amounting to ₩19,212 million ($17,183 thousand) from Seoul Guarantee Insurance Co., Ltd. in relation to the restoration of forest due to the production of limestone.

(2) The Group provides a guarantee of ₩12,580 million ($11,251 thousand) in relation to the personal loan of flight training center trainees.

(3) Credit line and details of credit agreements as of December 31, 2018, are as follows (in millions of Korean won and in thousands of U.S. dollars):

Description	Financial institutions	Currency	Limit
Credit line agreement	Hana Bank and others	USD	105,000
		KRW	130,000
Letters of credit	Hana Bank and others	USD	4,000
Ordinary loan	Shinhan Bank	KRW	10,000
Line of credit	NongHyup Bank	KRW	10,000
Facility loan	Korea Resource Corporation	KRW	760
		USD	109,000
		KRW	150,760

(4) Promissory note pledged as collateral
As of December 31, 2018, the Group has an outstanding promissory note pledged as collateral to the Korea Defense Industry Association.

(5) Pending litigations and others
The Group agreed to provide $26,000 thousand in flight ticket coupons to the plaintiffs in the U.S. Court class action related to airline ticket price-fixing collusion of flights to North America, and has recognized ₩6,550 million ($5,858 thousand) as a provision for remaining passenger flight ticket coupons as of December 31, 2018.

As of December 31, 2018, various claims, lawsuits and complaints arising from airline service operations are pending against the Group, and the ultimate outcome of these cases is unpredictable. Management believes that the ultimate outcome of these cases will not have any material adverse effect on the financial performance and position of the Group.

(6) New aircraft introduction plan
The Group has entered into various contracts with manufacturers, such as The Boeing Company, to purchase aircraft. The amount of such contracts is approximately $3,820 million as of December 31, 2018.

(7) Joint use agreement of passenger terminal
The Group and three other airlines, including Air France, entered into a joint use agreement with the JFK Airport in New York and established Terminal One Group Association (“TOGA”) to cooperate one of the new terminals of JFK Airport. TOGA may have to repay bond issued by New York Transportation Development Corporation based on terminal lease revenue, and they have provided TOGA with a joint guarantee up to $125 million for each terminal usage fee.

(8) Financial structure improvement agreement
As part of a group of conglomerates, the Group has signed an agreement with its main bank, KDB, to improve its financial structure by going under a financial structural reform in May 2009. Per the agreement, the Group pronounced plans to secure ₩3.49 trillion ($3,121 million). By December 31, 2016, the Group prepared approximately ₩3.69 trillion ($3,302 million) for financial structure improvement. The Group plans to further develop and implement plans to improve its business results in the future.

(9) The main agreements that the Group has entered into are as follows:

1) Korea Airport Service Co., Ltd. contributed certain ground-handling facilities constructed at the Incheon International Airport, in accordance with the agreement with the Ministry of Construction and Transportation dated March 9, 2001, in exchange for usage rights to the contributed facilities for 20 years.

2) On March 30, 2011, WLD Co., Ltd. entered into an agreement on "Wang San Marina Business" with Incheon Metropolitan City and Yongyu-muui Project Management Co., Ltd. Details of the agreement are summarized as follows:

-Location: 980 Eulwang-dong, Jung-gu, Incheon, Korea
-Business content: Construction of yacht tournament course held in 2014 Incheon Asian Games
-Total amount of investment: Approximately ₩230.9 billion ($207 million) (capital stock: ₩134.3 billion ($120 million), borrowings: ₩79.9 billion ($71 million), government subsidy: ₩16.7 billion ($15 million))
-Government subsidy: Incheon Metropolitan City government agreed to provide a total of ₩16.7 billion ($15 million) as financial subsidy depending on the construction in progress.

WLD Co., Ltd. accomplished timely development of Wang San Marina Business, including construction of 2014 Incheon Asian Games yacht tournament course; cooperated for successful host and operation of yacht tournament at 2014 Incheon Asian Games; and invested rest of the amount after excluding Wang San Marina Business operating expenses granted by the government, construction costs of access road and other infrastructure costs. The marina was completed in August 2017, and Wang San Marina has been fully open since June 2018. WLD Co., Ltd. has entered into a contract for repayment of property rights and the transfer of ownership rights was completed in July 2018. WLD Co., Ltd. is granted at least 30 years of operating rights after completion of construction of Wang San Marina facilities.

Meanwhile, the Group made a commitment with KDB to participate in paid-in capital increase of Wangsan Leisure Development Co., Ltd. if Wangsan Leisure Development Co., Ltd. is short of financial resources to repay the borrowings provided by KDB. The outstanding balance of borrowings is ₩65,103 million ($58,226 thousand) as of December 31, 2018. The deposits, land and buildings acquired under the purpose of Wang San Marina Business are pledged to Korea Development Co., Ltd. as collateral.

3) On June 30, 2011, IAT Co., Ltd. entered into an agreement with Korea Land & Housing Corporation and Inchon Development & Tourism Corporation about a project related to the "Attraction of Incheon Free Economic Zone, Yeongjong Sky City Airways Airplane Engine Maintenance Centre." Major terms of the agreement include investment of ₩120 billion ($107 million) by IAT Co., Ltd. for construction of an airplane engine maintenance center and acquisition of related land located at 779-11 Unbuk-dong, Jung-gu, Incheon, Korea.

As of December 31, 2018, preferred shares of IAT Co., Ltd., as cumulative and non-participative, will be converted proportionately to one common stock per one preferred stock on February 1, 2022 (conversion date). However, 7% of dividend is guaranteed for preferred shareholders until the conversion date, and in case of dividend in arrears, preferred shareholders have a right to refuse conversion until the dividend in arrears is paid. In accordance with the ones described above, the subsidiary classifies the amount asked by preferred shareholders at conversion date as a finance liability, which is discounted to present value.

Meanwhile, from August 1, 2021, to January 31, 2022, the Group has a call option for six months to buy the preferred shares held by United Technologies International Corporation-Asia Private Ltd., a preferred shareholder of Incheon Aviation Tech Co., Ltd., and the preferred shareholder of Incheon Aviation Tech Co., Ltd. also has a put option to sell the preferred shares to the Group during that period.

44. AMOUNT DUE FROM AND DUE TO CUSTOMERS FOR CONTRACT WORK:

(1) Changes in contract work for the year ended December 31, 2018, is as follows:

Description	Korean won Revenues incurred to date	Costs incurred to date	Recognized profits to date	Ending balance of construction contracts (*)
	(In millions)			
Military aircraft	₩ 289,484	₩ 275,520	₩ 13,964	₩ 14,644

Description	Translation into U.S. dollars (Note 2) Revenues incurred to date	Costs incurred to date	Recognized profits to date	Ending balance of construction contracts (*)
	(In thousands)			
Military aircraft	$ 258,907	$ 246,418	$ 12,489	$ 13,098

(*) The balance as of December 31, 2018, does not include the revenue recognition contract based on delivery. If included, the order balance is ₩ 2,611,911 million ($ 2,336,026 thousand).

(2) Amount due from and to customers for contract work as of December 31, 2018 and 2017, are as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
	(In millions)		(In thousands)	
Amount due from customers for contract work	₩ 39,175	₩ 207,454	$ 35,037	$ 185,542
Amount due to customers for contract work	(3,379)	(39,689)	(3,022)	(35,497)

(3) The estimated gross contract costs for contracts as of December 31, 2017, changed during current period. Details of its effects on profit and loss for the current and future periods, and gross amount due from customers for contract work are as follows:

	Korean won					
Description	Construction loss provisions	Estimated increase (decrease) in contract revenue	Estimated increase (decrease) in contract cost	Influence on current profit	Influence on future profit	Increase (decrease) in due from customers for contract work (due to customers for contract work)
	(In millions)					
Military aircraft	₩ -	₩ 18,511	₩ 8,802	₩ 9,753	₩ (44)	₩ 9,709

	Translation into U.S. dollars (Note 2)					
Description	Construction loss provisions	Estimated increase (decrease) in contract revenue	Estimated increase (decrease) in contract cost	Influence on current profit	Influence on future profit	Increase (decrease) in due from customers for contract work (due to customers for contract work)
	(In thousands)					
Military aircraft	$ -	$ 16,566	$ 7,872	$ 8,724	$ (40)	$ 8,684

(4)There is no contract more than 5% of the Group's revenue in the prior period that is recognized in the current period by the stage-of-completion method on the basis of the percentage of total costs incurred to date bearing to the estimated total contract costs of instruments for the years ended December 31, 2018.

45. ASSETS HELD FOR SALE:

(1) Assets held for sale as of December 31, 2018 and 2017, are summarized as follows:

	Korean won		Translation into U.S. dollars (Note 2)	
	2018	2017	2018	2017
Assets held for sale	(In millions)		(In thousands)	
Current assets	₩ 12,037	₩ 138,883	$ 10,765	$ 124,213
Aircraft and engines(*1	-	49,830	-	44,567
Land	11,365	55,312	10,165	49,469
Buildings	672	20,340	600	18,191
Investments in associates	-	13,401	-	11,986
Non-current assets	-	-	-	-
	₩ 12,037	₩ 138,883	$ 10,765	$ 124,213

(*1) The Group reclassified a portion of aircraft and engines to assets held for sale according to the aircraft sales plan. The Group accordingly recognized an impairment loss of ₩20,278 million ($18,136 thousand).

46. IMPACT OF ADOPTION OF K-IFRS 1115:

The effects of adoption of K-IFRS 1115 on the Group's consolidated statement of financial position and consolidated statement of comprehensive income (loss) as of and for the year ended December 31, 2018, is as follows:

(Consolidated statement of financial position)

2018

	Korean won		
	Amounts without adoption of K-IFRS 1115	Adjustments(*)	Amounts with adoption of K-IFRS 1115
		(In millions)	
Current assets	₩ 3,821,899	₩ 50,474	₩ 3,872,373
Non-current assets	21,713,471	(6,191)	21,707,280
Total assets	25,535,370	44,283	25,579,653
Current liabilities	7,437,197	84,666	7,521,863
Non-current liabilities	15,036,692	(10,685)	15,026,007
Total liabilities	22,473,889	73,981	22,547,870
Total shareholder’s equity	₩ 3,061,481	₩ (29,698)	₩ 3,031,783

	Translation into U.S. dollars (Note 2)		
	Amounts without adoption of K-IFRS 1115	Adjustments(*)	Amounts with adoption of K-IFRS 1115
		(In thousands)	
Current assets	$ 3,418,208	$ 45,142	$ 3,463,350
Non-current assets	19,419,973	(5,538)	19,414,435
Total assets	22,838,181	39,604	22,877,785
Current liabilities	6,651,638	75,723	6,727,361
Non-current liabilities	13,448,432	(9,556)	13,438,876
Total liabilities	20,100,070	66,167	20,166,237
Total shareholder’s equity	$ 2,738,111	$ (26,563)	$ 2,711,548

(*) Upon adoption of K-IFRS 1115, the accounting policies have been changed in revenue recognition of aerospace division, deferred revenue, etc.

(Consolidated statement of comprehensive income(loss))

	Korean won		
	Amounts without adoption of K-IFRS 1115	Adjustments	Amounts with adoption of K-IFRS 1115
		(In millions)	
Sales	₩ 12,905,198	₩ 115,078	₩ 13,020,276
Cost of sales	11,056,113	(52,576)	11,003,537
Gross profit	1,849,085	167,654	2,016,739
Operating income	594,284	46,006	640,290
Net income (loss)	(225,456)	39,805	(185,651)
Comprehensive income (loss)	(457,403)	39,805	(417,598)

	Translation into U.S. dollars (Note 2)		
	Amounts without adoption of K-IFRS 1115	Adjustments	Amounts with adoption of K-IFRS 1115
		(In thousands)	
Sales	$ 11,542,078	$ 102,923	$ 11,645,001
Cost of sales	9,888,304	(47,023)	9,841,281
Gross profit	1,653,774	149,946	1,803,720
Operating income	531,512	41,147	572,659
Net income (loss)	(201,642)	35,601	(166,041)
Comprehensive income (loss)	(409,090)	35,601	(373,489)

(*) Upon adoption of K-IFRS 1115, the accounting policies have been changed in revenue recognition of aerospace division, deferred revenue, etc.

Meanwhile, the application of K-IFRS 1115 has not significant impact on the consolidated statement of cash flows.

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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, 2018 and 2017 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, 2018 and 2017, 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, 2019

This report is effective as of March 28, 2019, 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.

Korea Development Bank
Separate Statements of Financial Position
December 31, 2018 and 2017

(In millions of won)	Notes		December 31, 2018 (*)	December 31, 2017 (*)
Assets				
Cash and due from banks	4,51,52,55	₩	7,175,229	6,608,642
Securities measured at FVTPL	5,51,52,55		8,509,187	-
Financial assets held for trading	6,51,52,55		-	926,737
Securities measured at FVOCI	7,45,51,52,55		22,805,676	-
Available-for-sale financial assets	8,45,51,52,55		-	32,062,921
Securities measured at amortized cost	9,45,51,52,55		1,695,927	-
Held-to-maturity financial assets	10,51,52,55		-	12,313
Loans measured at FVTPL	11,51,52,55		778,884	-
Loans measured at amortized cost	12,51,52,55		134,245,132	-
Loans	13,51,52,55		-	136,279,322
Derivative financial assets	14,51,52,53,55		3,875,908	6,249,609
Investments in subsidiaries and associates	15,54		25,430,930	22,749,389
Property and equipment, net	16,54		698,602	592,884
Investment property, net	17,54		71,119	78,391
Intangible assets, net	18,54		173,886	90,502
Current tax assets			4,813	4,383
Assets held for sale	20		-	58,473
Other assets	19,51,52,55		4,309,467	7,465,441
Total assets		₩	209,774,760	213,179,007
Liabilities				
Financial liabilities measured at FVTPL	21,51,52,55	₩	2,164,538	1,583,713
Deposits	22,51,52,55		32,445,775	33,058,179
Borrowings	23,51,52,55		19,809,741	20,971,629
Debentures	24,51,52,55		119,286,001	117,818,982
Derivative financial liabilities	14,51,52,53,55		3,232,628	5,907,803
Defined benefit liabilities	25		62,151	45,647
Provisions	26		1,388,718	1,363,951
Deferred tax liabilities	43		1,088,171	973,497
Current tax liabilities			46,953	337,978
Other liabilities	27,51,52,55		5,264,857	8,501,497
Total liabilities			184,789,533	190,562,876
Equity				
Issued capital	1,28		18,108,099	17,938,099
Capital surplus	28		2,497,177	2,498,001
Accumulated other comprehensive income	28		(32,698)	436,749
Retained earnings	28		4,412,649	1,743,282
(Regulatory reserve for credit losses of ₩1,372,030 million and ₩1,308,500 million as of December 31, 2018 and 2017, respectively)				
(Required provision for (reversal of) regulatory reserve for credit losses of ₩(144,330) million and ₩63,530 million as of December 31, 2018 and 2017, respectively)				
(Planned provision for (reversal of) regulatory reserve for credit losses of ₩(144,330) million and ₩63,530 million as of December 31, 2018 and 2017, respectively)				
Total equity			24,985,227	22,616,131
Total liabilities and equity		₩	209,774,760	213,179,007

(*) The separate statement of financial position as of December 31, 2018 is prepared in accordance with Korean IFRS 1109; however, the comparative separate statement of financial position as of December 31, 2017 was not retrospectively restated to apply Korean IFRS 1109.

See accompanying notes to the separate financial statements.

Korea Development Bank
Separate Statements of Comprehensive Income
Years ended December 31, 2018 and 2017

(In millions of won, except earnings per share information)	Notes		2018 (*)	2017 (*)
Interest income	29	₩	5,145,852	4,873,273
Interest expense	29		(3,763,066)	(3,386,902)
Net interest income	54		1,382,786	1,486,371
Net fees and commission income	30		337,389	403,578
Dividend income	31		730,434	850,811
Net loss on securities measured at FVTPL	32		(5,872)	-
Net loss on financial assets held-for-trading	33		-	(22,117)
Net gain (loss) on financial liabilities measured at FVTPL	34		(43,767)	80,360
Net gain on securities measured at FVOCI	35		12,026	-
Net gain on available-for-sale financial assets	36		-	885,026
Net gain on derivatives	37		177,604	619,562
Net foreign currency transaction gain (loss)	38		127,284	(321,777)
Other operating expense, net	39		(58,593)	(355,331)
Non-interest income, net			1,276,505	2,140,112
Provision for credit losses	40		472,548	1,490,437
General and administrative expenses	41,54		675,684	661,296
Operating income	54		1,511,059	1,474,750
Reversal of impairment loss (impairment loss) on investments in subsidiaries and associates	15		1,340,951	(773,910)
Other non-operating income	42		60,826	18,038
Other non-operating expense	42		(21,932)	(36,286)
Non-operating income (expense), net			1,379,845	(792,158)
Profit before income taxes			2,890,904	682,592
Income tax expense	43		381,059	247,810
Profit for the year	28		2,509,845	434,782
(Profit for the year adjusted for regulatory reserve for credit losses: ₩2,645,913 million and ₩371,252 million for the years ended December 31, 2018 and 2017, respectively)				
Other comprehensive income for the year, net of tax	28		(129,111)	(776,716)
Items that are or may be reclassified subsequently to profit or loss:				
Net loss on securities measured at FVOCI			(103,311)	-
Valuation loss on available-for-sale financial assets, net			-	(689,806)
Exchange differences on translation of foreign operations			36,403	(91,636)
Valuation gain on cash flow hedge			3,139	7,990
			(63,769)	(773,452)
Items that will not be reclassified to profit or loss:				
Net loss on securities measured at FVOCI			(54,612)	-
Fair value changes on financial liabilities designated at fair value due to credit risk			(6,342)	-
Remeasurements of defined benefit liabilities			(4,388)	(3,264)
			(65,342)	(3,264)
Total comprehensive income (loss) for the year		₩	2,380,734	(341,934)
Earnings per share				
Basic and diluted earnings per share (in won)	44	₩	696	123

(*) The separate statement of comprehensive income for the year ended December 31, 2018 is prepared in accordance with Korean IFRS 1109; however, the comparative separate statements of comprehensive income for the year ended December 31, 2017 were not retrospectively restated to apply Korean IFRS 1109.

See accompanying notes to the separate financial statements.

Korea Development Bank
Separate Statements of Changes in Equity
Years ended December 31, 2018 and 2017

(In millions of won)		Issued capital	Capital surplus	Accumulated other comprehensive income	Retained earnings	Total equity
Balance at January 1, 2017	₩	17,543,099	2,499,947	1,213,465	1,308,500	22,565,011
Profit for the year		-	-	-	434,782	434,782
Valuation loss on available-for-sale financial assets		-	-	(689,806)	-	(689,806)
Exchange differences on translation of foreign operations		-	-	(91,636)	-	(91,636)
Valuation gain on cash flow hedge		-	-	7,990	-	7,990
Remeasurements of defined benefit liabilities		-	-	(3,264)	-	(3,264)
Total comprehensive income for the year		-	-	(776,716)	434,782	(341,934)
Paid in capital increase		395,000	(1,946)	-	-	393,054
Transaction with owners		395,000	(1,946)	-	-	393,054
Balance at December 31, 2017 (*)	₩	17,938,099	2,498,001	436,749	1,743,282	22,616,131
Balance at January 1, 2018	₩	17,938,099	2,498,001	436,749	1,743,282	22,616,131
Changes in accounting policy (Note 2)		-	-	(324,629)	290,907	(33,722)
Restated balance at January 1, 2018		17,938,099	2,498,001	112,120	2,034,189	22,582,409
Profit for the year		-	-	-	2,509,845	2,509,845
Net gain (loss) on securities measured at FVOCI		-	-	(173,630)	15,707	(157,923)
Exchange differences on translation of foreign operations		-	-	36,403	-	36,403
Valuation gain on cash flow hedge		-	-	3,139	-	3,139
Fair value changes on financial liabilities designated at fair value due to credit risk		-	-	(6,342)	-	(6,342)
Remeasurements of defined benefit liabilities		-	-	(4,388)	-	(4,388)
Total comprehensive income for the year		-	-	(144,818)	2,525,552	2,380,734
Dividends		-	-	-	(147,092)	(147,092)
Paid in capital increase		170,000	(824)	-	-	169,176
Transaction with owners		170,000	(824)	-	(147,092)	22,084
Balance at December 31, 2018 (*)	₩	18,108,099	2,497,177	(32,698)	4,412,649	24,985,227

(*) The separate statement of changes in equity for the year ended December 31, 2018 is prepared in accordance with Korean IFRS 1109; however, the comparative separate statement of changes in equity for the year ended December 31, 2017 was not retrospectively restated to apply Korean IFRS 1109.

See accompanying notes to the separate financial statements.

Korea Development Bank
Separate Statements of Cash Flows
Years ended December 31, 2018 and 2017

(In millions of won)	Notes		2018 (*)	2017 (*)
Cash flows from operating activities				
Profit for the year		₩	2,509,845	434,782
Adjustments for:				
Income tax expense	43		381,059	247,810
Interest income	29		(5,145,852)	(4,873,273)
Interest expense	29		3,763,066	3,386,902
Dividend income	31		(730,434)	(850,811)
Loss on valuation of securities measured at FVTPL	32		32,139	-
Gain on disposal of securities measured at FVTPL			(40,025)	-
Loss on valuation of financial assets held for trading	33		-	1,262
Loss (gain) on valuation of financial liabilities measured at FVTPL	34		43,767	(77,678)
Gain on disposal of securities measured at FVOCI	35		(5,380)	-
Reversal of loss allowance for securities measured at FVOCI	35		(6,646)	-
Gain on valuation of loans measured at FVTPL	39		(32,457)	-
Gain on disposal of available-for-sale financial assets	36		-	(1,069,778)
Impairment loss on available-for-sale financial assets	36		-	184,751
Gain on valuation of derivatives			(99,487)	(158,758)
Net loss (gain) on fair value hedged items	37		36,062	(626,860)
Loss (gain) on foreign exchange translations	38		(114,855)	332,015
Loss (gain) on disposal of investments in subsidiaries and associates	39		(256,639)	9,512
Impairment loss (reversal of impairment loss) on investments in subsidiaries and associates			(1,340,951)	773,910
Provision for loan loss allowance	40		377,405	1,212,184
Provision for other assets	40		22,686	35,497
Increase (reversal) of provision for payment guarantees	26		121,728	(117,793)
Increase (reversal) of provision for unused commitments	26		(10,438)	267,690
Increase (reversal) of financial guarantee provision	26		(38,833)	92,859
Reversal of provision for possible losses from lawsuits	26		(11)	(1,053)
Increase of other provisions	26		-	6,700
Defined benefit costs	25		40,515	38,745
Depreciation of property and equipment	16		32,939	29,318
Gain on disposal of assets held for sale	42		(52,344)	(9,195)
Loss (gain) on disposal of property and equipment	42		726	(485)
Loss on disposal of intangible assets	42		-	16
Depreciation of investment property	17		2,011	2,019
Amortization of intangible assets	18		17,999	20,674
Loss (gain) on redemption of debentures			(8)	47
			(3,002,258)	(1,143,773)
Changes in operating assets and liabilities:				
Due from banks			(1,286,439)	(540,316)
Securities measured at FVTPL			(2,474,785)	-
Financial assets held for trading			-	1,287,522
Loans measured at FVTPL			386,261	-
Loans measured at amortized cost			48,974	-
Loans			-	364,004
Derivative financial instruments			(336,008)	(257,267)
Other assets			3,055,245	(1,271,121)
Financial liabilities measured at FVTPL			-	(231,686)
Deposits			(616,964)	(4,590,771)
Defined benefit liabilities			(30,064)	(40,035)
Other liabilities			(3,839,223)	1,571,483
			(5,093,003)	(3,708,187)
Income taxes paid			(482,267)	(36,531)
Interest received			5,091,330	4,652,416
Interest paid			(3,096,862)	(3,600,564)
Dividends received			731,948	852,150
Net cash used in operating activities		₩	(3,341,267)	(2,549,707)

Korea Development Bank
Separate Statements of Cash Flows
Years ended December 31, 2018 and 2017

(Continued)

(In millions of won)	Notes		2018 (*)	2017 (*)
Cash flows from investing activities				
Net increase of securities measured at FVTPL		₩	(1,368,215)	-
Disposal of securities measured at FVOCI	7		14,574,207	-
Acquisition of securities measured at FVOCI	7		(9,560,772)	-
Disposal of available-for-sale financial assets	8		-	18,738,795
Acquisition of available-for-sale financial assets	8		-	(14,244,489)
Redemption of securities measured at amortized cost	9		12,236	-
Acquisition of securities measured at amortized cost	9		(1,694,688)	-
Redemption of held-to-maturity financial assets	10		-	2,080
Disposal of property and equipment	16		352	933
Acquisition of property and equipment	16		(132,418)	(39,335)
Acquisition of investment property	17		(1,908)	-
Disposal of intangible assets	18		-	58
Acquisition of intangible assets	18		(101,355)	(52,596)
Disposal of investments in subsidiaries and associates			1,099,577	593,604
Acquisition of investments in subsidiaries and associates			(2,187,278)	(1,415,135)
Disposal of non-current assets held for sale			110,817	35,123
Net cash provided by investing activities			750,555	3,619,038
Cash flows from financing activities				
Increase of financial liabilities measured at FVTPL			528,310	-
Proceeds from borrowings			33,355,729	33,126,111
Repayment of borrowings			(34,535,527)	(35,701,335)
Proceeds from issuance of debentures			109,476,097	98,720,241
Repayment of debentures			(108,125,823)	(97,410,868)
Dividends			(147,092)	-
Paid in capital increase			169,176	143,054
Net cash provided by (used in) financing activities			720,870	(1,122,797)
Effects from changes in foreign currency exchange rate for cash and cash equivalents held			132,964	(451,170)
Net decrease in cash and cash equivalents			(1,736,878)	(504,636)
Cash and cash equivalents at beginning of the year			8,586,213	9,090,849
Cash and cash equivalents at end of the year	49	₩	6,849,335	8,586,213

(*) The separate statement of cash flows for the year ended December 31, 2018 is prepared in accordance with Korean IFRS 1109; however, the comparative separate statement of cash flows for the year ended December 31, 2017 was not retrospectively restated to apply Korean IFRS 1109.

See accompanying notes to the separate financial statements.

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 ₩18,108,099 million with 3,621,619,768 shares of issued and outstanding as of December 31, 2018 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, 2018 is as follows:

	Domestic		Overseas			
	Head Office	Branches	Branches	Subsidiaries	Representative offices	Total
KDB	1	74	9	5	8	97

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, 2018. The nature and the impact of each new standard or amendment are described below:

K-IFRS 1109 'Financial Instruments'
K-IFRS 1109 *'Financial Instruments'* replaces the existing guidance in K-IFRS 1039 *'Financial Instruments: Recognition and Measurement'*. K-IFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. Also, KIFRS 1107 Financial Instruments: Disclosures has been amended in accordance with K-IFRS 1109.

The Bank's accounting policies have been changed and the amounts recognized in the financial statements have been modified as a result of the adoption of KIFRS 1109 on January 1, 2018. In accordance with the transitional provisions, the financial statements for the year ended December 31, 2017 have not been restated.

The main features of the standard include: a business model for the managing financial assets; classification and measurement of financial assets based on contractual cash flow characteristics of financial assets; an impairment model for financial instruments based on expected credit losses; the hedged item that meet the requirements of hedge accounting, increases in hedging instruments, or changes in the evaluation method for hedge effectiveness.

2. Basis of Preparation, Continued

Classification and measurement of financial assets
K-IFRS 1109 requires a financial asset to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL) based on the holder's business model and instrument's contractual cash flow characteristics as shown below. If a hybrid contract contains a host that is a financial asset, an embedded derivative is not separated from the host and the entire hybrid contract is classified according to the requirement of K-IFRS 1109.

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	Other
Objective of collecting contractual cash flows	Measured at amortized cost (*1)	
Objective of collecting contractual cash flows and selling financial assets	Measured at FVOCI (*1)	Measured at FVTPL (*2)
Objective of selling or others	Measured at FVTPL	

(*1) Financial assets may be irrevocably designated as measured at FVTPL to eliminate or reduce accounting mismatch.
(*2) Investments in equity instruments not held for trading may be irrevocably designated as measured at FVOCI.

Classification and measurement of financial liabilities
K-IFRS 1109 requires that the amount of change in fair value of the financial liability designated as measured at FVTPL that is attributable to changes in the credit risk shall be presented in other comprehensive income and the amount shall not be reclassified as profit or loss. If the requirements create or enlarge an accounting mismatch in profit or loss, all gains or losses on that liability including the effects of changes in the credit risk shall be presented in profit or loss.

Impairment: financial assets and contract assets
In K-IFRS 1109, impairment of debt instruments measured at amortized costs or FVOCI, lease receivables, contract assets, loan commitments and financial guarantee contracts is recognized based on the expected credit loss (ECL) impairment model.

K-IFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. A loss allowance is measured based on the 12-month ECL or life-time ECL which allows early recognition of credit loss compared to the incurred loss model of K-IFRS 1039.

Classification		Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

In K-IFRS 1109, the cumulative changes in lifetime ECL since initial recognition are recognized as a loss allowance for originated credit-impaired financial assets.

Hedge accounting
K-IFRS 1109 maintains mechanics of hedge accounting (fair value hedge, cash flow hedge and a hedge of a net investment in a foreign operation) as set forth in K-IFRS 1039. However, unlike requirements in K-IFRS 1039 that are too complex and strict, K-IFRS 1109 is more practical, principle based and less strict and focuses on the entity's risk management activities. Also, K-IFRS 1109 allows broader range of hedged items and hedging instruments. Under K-IFRS 1039, a hedge is assessed to be highly effective only if the offset is in the range of 80-125 percentage by performing numerical test of effectiveness. In K-IFRS 1109, such requirements are alleviated.

(In millions of won)

2. Basis of Preparation, Continued

Adjustments in the separate statement of financial position as a result of the adoption of K-IFRS 1109
The Bank's categories and carrying amounts of financial assets per K-IFRS 1039 and K-IFRS 1109 as of January 1, 2018 (the date of the initial application of K-IFRS 1109) are as follows:

Measurement categories			Carrying amounts			
December 31, 2017 (K-IFRS 1039)	January 1, 2018 (K-IFRS 1109)		K-IFRS 1039	Reclassification	Remeasurement (*)	K-IFRS 1109
Cash and due from banks	Cash and due from banks	₩	6,608,642	-	-	6,608,642
Financial assets at fair value through profit or loss:						
Financial assets held for trading (debt securities)	Securities measured at FVTPL		911,203	-	-	911,203
Financial assets held for trading (equity securities)			15,534	-	-	15,534
			926,737	-	-	926,737
Available-for-sale financial assets:						
Available-for-sale financial assets (debt securities)	Securities measured at FVOCI		17,609,058	(25,073)	-	17,583,985
	Loans measured at amortized cost		-	25,073	(75)	24,998
Available-for-sale financial assets (equity securities)	Securities measured at FVTPL		-	3,966,146	(9,882)	3,956,264
	Securities measured at FVOCI		14,453,863	(4,216,878)	(55)	10,236,930
	Loans measured at FVTPL		-	250,732	-	250,732
			32,062,921	-	(10,012)	32,052,909
Held-to-maturity financial assets	Securities measured at amortized cost		12,313	-	(1)	12,312
Loans	Loans measured at amortized cost		136,279,322	(492,460)	(246,091)	135,540,771
	Loans measured at FVTPL		-	630,810	251,146	881,956
			136,279,322	138,350	5,055	136,422,727
Derivative financial assets:						
Trading purpose derivative financial assets	Trading purpose derivative financial assets		5,628,135	(138,350)	-	5,489,785
Hedging purpose derivative financial assets	Hedging purpose derivative financial assets		621,474	-	-	621,474
			6,249,609	(138,350)	-	6,111,259
Other financial assets	Other financial assets		7,378,355	-	(4,709)	7,373,646
		₩	189,517,899	-	(9,667)	189,508,232

(*) The changes of provision for credit losses remeasured due to the adoption of K-IFRS 1109 are included.

On January 1, 2018 (the date of the initial application of K-IFRS 1109), ₩13,131 million of valuation loss from own credit risk of financial liabilities designated at fair value through profit or loss was reclassified to other comprehensive income.

(In millions of won)

2. Basis of Preparation, Continued

On January 1, 2018 (the date of the initial application of K-IFRS 1109), the Bank classified certain financial assets, other than financial assets at amortized cost as at January 1, 2018, to amortized cost as follows:

Measurement categories				
After reclassification (K-IFRS 1109)	Before reclassification (K-IFRS 1039)		Fair value	Recognizable valuation gain or loss if not reclassified
Loans measured at amortized cost (Privately placed public bonds)	Available-for-sale financial assets (Privately placed public bonds)	₩	25,073	73

The reconciliation of the ending allowances/provision in accordance with K-IFRS 1039 to the opening allowances in accordance with K-IFRS 1109 are as follows:

Measurement categories			Allowances/Provision			
December 31, 2017 (K-IFRS 1039)	January 1, 2018 (K-IFRS 1109)		K-IFRS 1039	Reclassification	Remeasurement	K-IFRS 1109
Loans and receivables						
Due from banks	Due from banks	₩	-	-	-	-
Loans	Loans measured at amortized cost		3,303,232	-	246,091	3,549,323
	Loans measured at FVTPL		212,221	(212,221)	-	-
Other financial assets	Other financial assets		236,203	-	4,709	240,912
Available-for-sale financial assets						
Debt securities	Securities measured at FVOCI (*)		-	-	119,331	119,331
Held-to-maturity financial assets						
Debt securities	Securities measured at amortized cost		-	-	1	1
Guarantees and Commitments						
Payment guarantees (financial guarantee contracts, etc.)	Payment guarantees (financial guarantee contracts, etc.)		773,543	-	17,956	791,499
Unused commitments	Unused commitments		445,946	-	18,886	464,832
		₩	4,971,145	(212,221)	406,974	5,165,898

(*) The provision for credit losses for securities measured at FVOCI was recognized as other comprehensive income.

(In millions of won)

2. Basis of Preparation, Continued

On January 1, 2018 (the date of the initial application of K-IFRS 1109), the impact on retained earnings is as follows:

Description		Impact of application
Retained earnings as of December 31, 2017 (before adoption of K-IFRS 1109)	₩	1,743,282
Reversal of impairment loss on equity securities measured at FVOCI		477,360
Reclassification of accumulated other comprehensive income relating to available-for-sale financial assets reclassified to financial assets meaured at FVTPL		(23,535)
Remeasurement after reclassified from available-for-sale financial assets to financial assets measured at FVTPL		(9,882)
Translation of equity securities denominated in foreign currencies		(425)
Effect of changes in exchange differences on translation of foreign operations		(48)
Effect of adjustment in convertible private bond, etc. classified as loans measured at FVTPL		251,146
Effect of adjustment in valuation loss from self-credit-risk of financial liabilities designated at fair value through profit or loss		(9,520)
Measurement of expected credit losses of loans measured at amortized cost		(246,091)
Measurement of expected credit losses of other financial assets		(4,709)
Measurement of expected credit losses of debt securities measured at FVOCI		(119,331)
Measurement of expected credit losses of securities measured at amortized cost		(1)
Effect of changes in provision for payment guarantee and unused commitments		(36,842)
Tax effect		12,785
Retained earnings as of January 1, 2018 (after adoption of K-IFRS 1109)	₩	2,034,189

On January 1, 2018 (the date of the initial application of K-IFRS 1109), the impact on other comprehensive income is as follows:

Description		Impact of application
Other comprehensive income as of December 31, 2017 (before adoption of K-IFRS 1109)	₩	436,749
Reversal of impairment loss on equity securities measured at FVOCI		(477,360)
Reclassified from available-for-sale financial assets to financial assets measured at FVTPL		23,535
Effect of adjustment in valuation loss from self-credit-risk of financial liabilities designated at fair value through profit or loss		9,520
Measurement of expected credit losses of debt securities measured at FVOCI		119,331
Translation of equity securities denominated in foreign currencies		(55)
Effect of changes in exchange differences on translation of foreign operations		48
Others		352
Other comprehensive income as of January 1, 2018 (after adoption of K-IFRS 1109)	₩	112,120

2. Basis of Preparation, Continued

K-IFRS 1115 'Revenue from Contracts with Customers'
K-IFRS 1115 *'Revenue from Contracts with Customers'* replaces the existing guidance in K-IFRS 1011 *'Construction Contracts'*, K-IFRS 1018 *'Revenue'*, K-IFRS 2113 *'Customer Loyalty Programmes'*, K-IFRS 2115 *'Agreements for the Construction of Real Estate'*, K-IFRS 2118 *'Transfers of Assets from Customers'* and K-IFRS 2031 *'Revenue - Barter Transactions Involving Advertising Services'*. The core principle of K-IFRS 1115 is that an entity shall recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services and it introduces a five-step approach to revenue recognition and measurement in accordance with the core principle. The adoption of K-IFRS 1115 has no significant impact on the financial statements of the Bank.

K-IFRS 1028 'Investments in Associates and Joint Ventures'
When an investment in an associate or a joint venture is held by, or it held indirectly through, an entity that is a venture capital organization, a mutual fund, etc., the entity may elect to measure that investment at fair value through profit or loss. The amendments clarify that an entity shall make this election separately for each associate of joint venture, at initial recognition of the associate or joint venture. The adoption of K-IFRS 1028 has no significant impact on the financial statements of the Bank.

K-IFRS 1102 'Share-based Payment'
Amendment to K-IFRS 1102 clarifies the accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled and valuation method used to measure fair value of cash-settled share-based payment. The adoption of K-IFRS 1102 has no significant impact on the financial statements of the Bank.

Enactments to Interpretation 2122'Foreign Currency Transactions and Advance Consideration'
According to these enactments *'Foreign Currency Transactions and Advance Consideration'*, the date of the transaction for determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. If there are multiple payments or receipts in advance, the entity shall determine a date of the transaction for each payment or receipt of advance consideration. The adoption of enactments to Interpretation 2122 has no significant impact on the financial statements of the Bank.

(ii) 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, 2018, and the Bank has not early adopted them. The Bank is currently in progress of analyzing the potential impact on the financial statements resulting from the application of these standards, interpretations and amendments.

K-IFRS 1116 'Leases'
K-IFRS 1116 *'Leases'* will replace K-IFRS 1017 *'Leases'*, Interpretation 2104 *'Determining whether an Arrangement contains a Lease'*, Interpretation 2015 *'Operating Leases-Incentives'*, and Interpretation 2027 *'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'*. The Bank will adopt this standard for annual periods beginning on or after January 1, 2019.

At inception of a contract, the Bank shall assess whether the contract is, or contains, a lease. Also, at the date of initial application, the Bank shall assess whether the contract is, or contains, a lease in accordance with the standard. However, the Bank may not need to reassess all contracts with applying the practical expedient that can be applied to contracts entered before the date of initial application.

For a contract that is, or contains, a lease, the Bank shall account for each lease component within the contract as a lease separately from non-lease components of the contract. The lessee is required to recognize the right-of-use assets and lease liabilities representing the right to occupy the underlying assets and the duty to make lease payments, respectively. However, as the cases of short-term lease and the low value assets the exemption is applicable. In addition, as a practical expedient, the lessee may elect, by class of underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

2. Basis of Preparation, Continued

From a lessor's accounting perspective, K-IFRS 1116 will not significantly change in comparison to K-IFRS 1017.

(a) Accounting for a lessee
A lessee shall apply this standard to its leases either (a) retrospectively to each prior reporting period presented applying K-IFRS 1008 'Accounting Policies, Changes in Accounting Estimates and Errors' (Full retrospective application); or (b) with the cumulative effect of initially applying the standard being recognized at the date of initial application.

The Bank plans to apply K-IFRS 1116 retrospectively with the cumulative effect of initially applying the standard and as such will not restate any comparative information.

The Bank performed an impact assessment to identify potential financial effects of applying K-IFRS 1116. The assessment was performed based on available information as at January 1, 2019 to identify effects on 2019 financial statements.

The total minimum lease payment expected to be paid by the Bank in relation to operating leases before discounted to their present value is ₩40,257 million. When the payment is discounted at incremental borrowing rate of the lessee, the total minimum lease payment amounts to ₩37,144 million. For the all (or partial) contracts that are, or contain, a lease, the Bank plans to apply the practical expedient to account for each lease component and any associated non-lease components as a single lease component

Based on the impact assessment, the Bank expects the right-of-use asset and a lease liability as at January 1, 2019 to be increased by ₩46,496 million and ₩37,132 million, respectively. The results of the assessment in the financial effects may change due to additional information that the Bank may obtain in the future.

(b) Accounting for a lessor
For the lease accounting as the lessor from the Bank's point of view, the Bank expects the impact to the financial statements applying K-IFRS 1116 will not be significant.

Amendments to K-IFRS 1109 'Financial Instruments'
The narrow-scope amendments made to K-IFRS 1109 'Financial Instruments' enable entities to measure certain prepayable financial assets with negative compensation at amortized cost. When a modification of a financial liability measured at amortized cost that does not result in the derecognition, a modification gain or loss shall be recognized in profit or loss. These amendments will be applied for annual periods beginning on or after January 1, 2019, with early adoption permitted.

Amendments to K-IFRS 1019 'Employee Benefits'
The amendments require that an entity shall calculate current service cost and net interest for the remainder of the reporting period after a plan amendment, curtailment or settlement based on updated actuarial assumptions from the date of the change. The amendments also require that a reduction in a surplus must be recognized in profit or loss even if that surplus was not previously recognized because of the impact of the asset ceiling. The amendments are effective for plan amendments, curtailments and settlements occurring in reporting periods that begin on or after 1 January 2019, with early adoption permitted.

Amendments to K-IFRS 1028 'Investments in Associates and Joint Ventures'
The amendments clarify that an entity shall apply K-IFRS 1109 to financial instruments in an associate or joint venture to which the equity method is not applied. These include long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture. The amendments clarify that an entity shall apply K-IFRS 1109 to other interests in an associate or joint venture to which the equity method is not applied. In addition, the entity shall apply the impairment requirements in K-IFRS 1109 first to its other long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture. These amendments will be applied retrospectively for annual periods beginning on or after January 1, 2019, with early adoption permitted. In accordance with the transitional provisions in K-IFRS 1109, the restatement of the comparative information is not required and the cumulative effects of initially applying the amendments retrospectively should be recognized in the beginning balance of retained earnings (or other components of equity, as appropriate) at the date of initial application.

2. Basis of Preparation, Continued

Enactment to Interpretation of K-IFRS 2123 'Uncertainty over Income Tax Treatments'
The Interpretation explains how to recognize and measure deferred and current income tax assets and liabilities where there is uncertainty over a tax treatment, and includes guidance on how to determine whether each uncertain tax treatment is considered separately or together. It also presents examples of circumstances where a judgement or estimate is required to be reassessed. This Interpretation will be applied for annual periods beginning on or after January 1, 2019, with early adoption permitted, and an entity can either restate the comparative financial statements retrospectively or recognize the cumulative effect of initially applying the Interpretation as an adjustment in the beginning balance at the date of initial application.

Annual Improvements to K-IFRS 2015 – 2017 Cycle:
The amendments to K-IFRS 1103 *'Business Combination'* clarify that when a party to a joint arrangement obtains control of a business that is a joint operation, and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the transaction is a business combination achieved in stages. And amendments to K-IFRS 1111 *'Joint Agreements'*, K-IFRS 1012 *'Income Tax'* and K-IFRS 1023 *'Borrowing Costs'* have been issued.

(3) Basis of measurement
The separate 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
- 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
These separate 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 held-for-trading, financial instruments designated at fair value through profit or loss, available-for-sale financial assets 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 (allowances for loan losses, provisions for payment guarantee, and unused commitments)

The Bank tests impairment and recognizes allowances for losses on financial assets classified at amortized cost, debt instruments measured at fair value through other comprehensive income and recognizes provisions for guarantees, and unused loan commitments. Accuracy of 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.

(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, 2019, which will be submitted for approval to the shareholders' meeting to be held on March 29, 2019.

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 translation are recognised 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 recognised in other comprehensive income. 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.

(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 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. <u>Significant Accounting Policies, Continued</u>

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 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 the statement of comprehensive income.

(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 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

(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 are 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 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 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.

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.

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
Leasehold improvements	4
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) 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.

(15) 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).

3. Significant Accounting Policies, Continued

(16) 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 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 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 EIR.

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

(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 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. A defined benefit plan defines the amount of pension benefit that an employee will receive on retirement and is usually dependent on one or more factors such as years of service and compensation.

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'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.

(18) 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.

(19) 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

(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 other borrowings, and the related interest from these securities is recorded as interest expense.

(21) 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.

(22) 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 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 Instruments'* 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.

(23) Dividend income
Dividend income is recognized upon the establishment of the Bank's right to receive the payment.

3. Significant Accounting Policies, Continued

(24) 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.

(25) 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.

(26) 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.

(In millions of won)

3. Significant Accounting Policies, Continued

(27) 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.

(28) 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, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Cash	₩	59,835	62,862
Due from banks in Korean won:			
Due from Bank of Korea		3,375,325	2,136,005
Other due from banks in Korean won		127,203	1,501,419
		3,502,528	3,637,424
Due from banks in foreign currencies / off-shores		3,612,866	2,908,356
	₩	7,175,229	6,608,642

(2) Restricted due from banks as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Reserve deposit	₩	2,070,742	1,248,969
Deposit of monetary stabilization account		1,460,000	1,100,000
Others		186,875	182,446
	₩	3,717,617	2,531,415

(In millions of won)

5. Securities Measured at FVTPL

(1) Details of securities in financial assets at fair value through profit or loss as of December 31, 2018 are as follows:

		December 31, 2018	
	Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:			
Stocks	₩ -	503,426	395,502
Equity investments	-	304,584	384,667
Beneficiary certificates	-	4,319,278	4,338,988
Government and public bonds	557,000	561,819	568,881
Financial bonds	1,820,000	1,808,285	1,808,254
Others	500,000	500,000	363,615
	2,877,000	7,997,392	7,859,907
Securities denominated in foreign currencies/off-shores:			
Stocks	-	569	2,694
Equity investments	-	23,769	23,877
Beneficiary certificates	-	452,002	465,515
Debt securities	97,007	97,787	96,785
	97,007	574,127	588,871
Loaned securities:			
Debt securities	60,000	60,455	60,409
	₩ 3,034,007	8,631,974	8,509,187

(2) Equity securities with disposal restrictions in financial assets at fair value through profit or loss as of December 31, 2018 are as follows:

	December 31, 2018		
Company	Number of shares	Carrying amount	Restricted period
National Happiness Fund Co., Ltd.	34,066	₩ 68,757	Undecided

(In millions of won)

6. Financial Assets Held for Trading

(1) Financial assets held for trading as of December 31, 2017 are as follows:

		December 31, 2017
Financial assets held for trading denominated in Korean won:		
Debt securities:		
Government and public bonds	₩	532,899
Financial assets held for trading denominated in foreign currencies/off-shores:		
Equity securities		15,534
Debt securities		378,304
		393,838
	₩	926,737

(2) Details of debt securities in financial assets held for trading as of December 31, 2017 are as follows:

		December 31, 2017		
		Face value	Acquisition cost	Fair value (Carrying amounts)
Government and public bonds in Korean won	₩	539,000	532,856	532,899
Debt securities in foreign currencies		379,283	379,734	378,304
	₩	918,283	912,590	911,203

(In millions of won)

7. Securities Measured at FVOCI

(1) Details of securities measured at FVOCI as of December 31, 2018 are as follows:

		December 31, 2018		
		Face value	Acquisition cost	Fair value (Carrying amounts)
Securities denominated in Korean won:				
Stocks and equity investments	₩	-	9,922,460	10,157,093
Government and public bonds		668,000	686,342	672,055
Financial bonds		1,532,000	1,530,624	1,531,580
Corporate bonds		6,317,929	6,317,848	6,295,050
Others		507,315	504,049	367,664
		9,025,244	18,961,323	19,023,442
Securities denominated in foreign currencies/off-shores:				
Equity securities		-	2,429	1,229
Debt securities		3,852,605	4,786,306	3,781,005
		3,852,605	4,788,735	3,782,234
	₩	12,877,849	23,750,058	22,805,676

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 on disposal of equity securities for the year ended December 31, 2018 is the amount of ₩21,665 million, which is directly recognized in retained earnings.

(2) Changes in securities measured at FVOCI for the year ended December 31, 2018 are as follows:

		2018
Beginning balance	₩	27,820,915
Acquisition		9,560,772
Disposal		(14,584,271)
Change due to amortization		(18,231)
Change in fair value		(198,340)
Reclassification		2,050
Foreign exchange differences		165,494
Others (*)		57,287
Ending balance	₩	22,805,676

(*) For the year ended December 31, 2018, others represent the increase in securities measured at FVOCI including shares of STX Heavy Industries Co., Ltd., STX Engine Co., Ltd., Wooyang HC Co., Ltd. and Namkwang Engineering & Construction Co., Ltd. acquired in accordance with the rehabilitation plan under the Debtor Rehabilitation and Bankruptcy Act, shares of Ecomaister Co., Ltd., Aribio Co., Ltd. and others acquired through exercise of conversion rights of the convertible bonds, and shares of DIB Co., Ltd. acquired pursuant to debt-to-equity swap decision of the Council of Financial Creditors under the Corporate Restructuring Promotion Act.

(In millions of won)

7. Securities Measured at FVOCI, Continued

(3) Equity securities with disposal restrictions in securities measured at FVOCI as of December 31, 2018 are as follows:

Company	December 31, 2018 Number of shares	Carrying amount	Restricted period
UAMCO., Ltd.	85,050	₩ 118,130	Undecided
Taihan Electric Wire Co., Ltd. (*1)	15,926,991	16,166	Undecided
EM-Tech.Co., Ltd.	81,621	1,396	Until February 7, 2019
Hanjin Heavy Industries & Construction Co., Ltd.	1,208,588	2,000	Until December 31, 2019
Pyeongsan Co., Ltd.	222,222	-	Until December 31, 2019
HMR Co., Ltd.	35,972	-	Until December 31, 2019
CREA IN Co., Ltd.	14,383	46	Until December 21, 2021
Kumho Tire Co., Inc.	21,339,320	113,312	Until July 6, 2023 (*2)
	38,914,147	₩ 251,050	

(*1) For the year ended December 31, 2018, some shares have been disposed of in accordance with the decision of the council consisted of major shareholders, etc.
(*2) From July 6, 2021, 50% of the shares may be sold every year.

(4) Changes in the loss allowance in relation to securities measured at FVOCI for the year ended December 31, 2018 are as follows:

	2018			
		Lifetime expected credit loss		
	12-month expected credit loss	Non credit-impaired	Credit-impaired	Total
Beginning balance	₩ 4,395	7,926	107,010	119,331
Transfer to 12-month expected credit loss	40	(40)	-	-
Transfer to lifetime expected credit losses:				
Transfer to non credit-impaired debt securities	(2,111)	2,111	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for (reversal of) loss allowance	2,021	(7,825)	(842)	(6,646)
Write-offs	-	-	(4,848)	(4,848)
Disposal	(971)	(5)	-	(976)
Debt-to-equity swap	-	-	(30,950)	(30,950)
Foreign currency translation	105	2	476	583
Ending balance	₩ 3,479	2,169	70,846	76,494

(In millions of won)

8. Available-for-Sale Financial Assets

(1) Available-for-sale financial assets as of December 31, 2017 are as follows:

		December 31, 2017
Available-for-sale financial assets denominated in Korean won:		
Equity securities:		
Stocks and equity investments	₩	10,959,862
Beneficiary certificates		2,937,542
Others		250,731
		14,148,135
Debt securities:		
Government and public bonds		1,795,216
Financial bonds		4,639,828
Corporate bonds		7,762,985
		14,198,029
		28,346,164
Available-for-sale financial assets denominated in foreign currencies/off-shores:		
Equity securities		305,728
Debt securities		3,411,029
		3,716,757
	₩	32,062,921

Equity securities with no quoted market prices in active markets and for which the fair value cannot be measured reliably are recorded at cost in the amount of ₩8,855,069 million as of December 31, 2017.

(2) Changes in available-for-sale financial assets for the year ended December 31, 2017 are as follows:

		2017
Beginning balance	₩	36,680,130
Acquisition		14,494,489
Disposal		(17,666,359)
Change due to amortization		(31,712)
Change in fair value		(879,960)
Impairment loss		(186,928)
Reversal of impairment loss		2,177
Reclassification		6,623
Foreign exchange differences		(434,682)
Others (*1)		79,143
Ending balance	₩	32,062,921

(*1) For the year ended December 31, 2017, others represents the increase in available-for-sale equity securities including shares of STX Heavy Industries Co., Ltd. acquired in accordance with the rehabilitation plan under the *Debtor Rehabilitation and Bankruptcy Act*, shares of Chinhung International Inc. acquired pursuant to debt-to-equity swap decision of the Council of Financial Creditors under the *Corporate Restructuring Promotion Act*, and shares of Phoenix Materials Co., Ltd. and others acquired through exercise of conversion rights of the convertible bonds.

(In millions of won)

8. Available-for-Sale Financial Assets, Continued

(3) Equity securities with disposal restrictions in available-for-sale financial assets as of December 31, 2017 are as follows:

	December 31, 2017			
Company	Number of shares		Carrying amount	Restricted period
Kumho Tire Co., Inc.	21,339,320	₩	94,426	Undecided
National Happiness Fund Co., Ltd.	34,066		56,710	Undecided
Taihan Electric Wire Co., Ltd. (*1)	16,476,369		18,536	Undecided
Ajin P & P Co., Ltd.	516,270		5,321	Undecided
Jaeyoung Solutec Co., Ltd.	1,962,000		3,532	Until May 18, 2018
Chinhung International Inc. (*2)	11,118,952		21,293	Until December 31, 2018
Hanjin Heavy Industries & Construction Co., Ltd.	1,208,588		4,000	Until December 31, 2018
CREA IN Co., Ltd.	14,383		46	Until December 21, 2021
	52,669,948	₩	203,864	

(*1) For the year ended December 31, 2017, some shares have been disposed of in accordance with the decision of the council consisted of major shareholders, etc.

(*2) The number of shares has changed after the decisions of disposal restriction release and debt-to-equity swap for the year ended December 31, 2017.

(4) Details of debt securities in available-for-sale financial assets as of December 31, 2017 are as follows:

		December 31, 2017		
		Face Value	Acquisition cost	Fair value (Carrying amounts)
Government and public bonds in Korean won	₩	1,790,000	1,838,455	1,795,216
Financial bonds in Korean won		4,648,000	4,644,729	4,639,828
Corporate bonds in Korean won		7,932,157	7,932,488	7,762,985
Debt securities denominated in foreign currencies / off shores		3,401,971	4,440,330	3,411,029
	₩	17,772,128	18,856,002	17,609,058

(In millions of won)

9. Securities Measured at Amortized Cost

(1) Securities measured at amortized cost as of December 31, 2018 are as follows:

		December 31, 2018	
		Amortized cost	Fair value
Securities denominated in Korean won:			
Government and public bonds	₩	494,518	494,518
Financial bonds		1,201,409	1,201,409
	₩	1,695,927	1,695,927

(2) Changes in available-for-sale financial assets for the year ended December 31, 2018 are as follows:

		2018
Beginning balance	₩	12,312
Acquisition		1,694,688
Redemption		(12,236)
Change due to amortization		1,127
Reversal of impairment loss		1
Foreign exchange differences		35
Ending balance	₩	1,695,927

(In millions of won)

10. Held-to-Maturity Financial Assets

(1) Held-to-maturity financial assets as of December 31, 2017 are as follows:

		December 31, 2017	
		Amortized cost	Fair value
Held-to-maturity financial assets in Korean won:			
Government and public bonds	₩	1,588	2,348
Held-to-maturity financial assets in foreign currencies:			
Corporate bonds		10,725	10,725
	₩	12,313	13,073

(2) Changes in held-to-maturity financial assets for the year ended December 31, 2017 are as follows:

		2017
Beginning balance	₩	15,867
Acquisition		-
Redemption		(2,080)
Change due to amortization		(97)
Foreign exchange differences		(1,377)
Ending balance	₩	12,313

(In millions of won)

11. Loans Measured at FVTPL

(1) Loans measured at FVTPL as of December 31, 2018 are as follows:

		December 31, 2018	
		Amortized cost	Fair value
Loans in Korean won:			
Loans for facility development	₩	1,639	1,620
Privately placed corporate bonds		794,682	777,264
	₩	796,321	778,884

(2) Gains (losses) related to loans measured at FVTPL for the year ended December 31, 2018 are as follows:

		2018
Transaction gains (losses) on loans measured at FVTPL		
Transaction gains	₩	17,507
Transaction losses		(29,456)
		(11,949)
Valuation gains (losses) on loans measured at FVTPL		
Valuation gains		80,597
Valuation losses		(48,140)
		32,457
	₩	20,508

(In millions of won)

12. Loans Measured at Amortized Cost

(1) Loans measured at amortized cost and allowance for loan losses as of December 31, 2018 are as follows:

		December 31, 2018	
		Amortized cost	Fair value
Loans in Korean won:			
Loans for working capital	₩	50,493,477	48,967,004
Loans for facility development		46,668,325	46,543,611
Loans for households		648,026	661,355
Inter-bank loans		2,376,183	2,194,341
		100,186,011	98,366,311
Loans in foreign currencies:			
Loans		13,396,054	13,840,164
Inter-bank loans		2,379,965	2,380,172
Loans borrowed from overseas financial institutions		139,187	142,882
Off-shore loans		11,570,036	12,042,473
		27,485,242	28,405,691
Other loans:			
Bills bought in foreign currency		1,336,852	1,323,601
Advances for customers on acceptances and guarantees		103,499	7,595
Privately placed corporate bonds		717,852	434,455
Others		7,946,159	7,927,061
		10,104,362	9,692,712
		137,775,615	136,464,714
Less:			
Allowance for loan losses		(3,539,074)	
Present value discount		(6,723)	
Deferred loan origination costs and fees		15,314	
	₩	134,245,132	

(In millions of won)

12. Loans Measured at Amortized Cost, Continued

(2) Changes in allowance for loan losses for the year ended December 31, 2018 are as follows:

		2018			
			Lifetime expected credit losses		
		12-month expected credit loss	Non credit-impaired	Credit-impaired	Total
Beginning balance	₩	226,114	1,292,255	2,030,954	3,549,323
Transfer to 12-month expected credit loss		5,085	(5,085)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired loans		(68,053)	535,451	(467,398)	-
Transfer to credit-impaired loans		(110,021)	(91,151)	201,172	-
Provision for loss allowance		114,415	11,864	251,126	377,405
Write-offs		-	-	(235,303)	(235,303)
Recovery		-	-	72,895	72,895
Sale		(215)	-	(114,954)	(115,169)
Debt-to-equity swap		-	-	(120,236)	(120,236)
Foreign currency translation		1,658	26,091	11,657	39,406
Other		320	(12,803)	(16,764)	(29,247)
Ending balance	₩	169,303	1,756,622	1,613,149	3,539,074

(In millions of won)

12. Loans Measured at Amortized Cost, Continued

(3) Gains (losses) related to loans measured at amortized cost for the year ended December 31, 2018 are as follows:

		2018
Provision for allowance for loan losses	₩	(377,405)
Losses on disposal of loan		(103,589)
	₩	(480,994)

(4) Changes in net deferred loan origination costs and fees for the year ended December 31, 2018 are as follows:

		2018
Beginning balance	₩	5,230
New deferrals		22,658
Amortization		(12,574)
Ending balance	₩	15,314

(In millions of won)

13. Loans and Allowance for Loan Losses

(1) Loans and allowance for loan losses as of December 31, 2017 are as follows:

		December 31, 2017	
		Amortized cost	Fair value
Loans in Korean won:			
Loans for working capital	₩	48,073,015	46,991,365
Loans for facility development		49,032,004	48,628,943
Loans for households		1,484,374	1,497,412
Inter-bank loans		2,173,687	1,963,261
		100,763,080	99,080,981
Loans in foreign currencies:			
Loans		13,011,258	13,485,711
Inter-bank loans		1,694,398	1,696,023
Loans borrowed from overseas financial institutions		154,063	158,332
Off-shore loans		10,962,265	11,368,199
		25,821,984	26,708,265
Other loans:			
Bills bought in foreign currency		2,253,141	2,191,273
Advances for customers on acceptances and guarantees		112,108	31,968
Privately placed corporate bonds		1,937,308	1,483,255
Others		9,117,599	9,025,687
		13,420,156	12,732,183
		140,005,220	138,521,429
Less:			
Allowance for loan losses		(3,515,453)	
Present value discount		(215,809)	
Deferred loan origination costs and fees		5,364	
	₩	136,279,322	

(2) Changes in allowance for loan losses for the year ended December 31, 2017 are as follows:

		2017						
		Loans in Korean won				Other loans		
		Loans for working capital	Loans for facility development	Others	Loans in foreign currencies	Privately placed corporate bonds	Others	Total
Beginning balance	₩	1,159,738	519,942	6,742	730,848	524,215	371,919	3,313,404
Provision for loan losses		797,689	349,378	(739)	(130,201)	38,082	157,975	1,212,184
Write-offs		(49,090)	(45,234)	(1,771)	(19,926)	-	(862)	(116,883)
Recovery		3,110	-	-	7,225	17	-	10,352
Sale		(94,787)	(52,788)	-	(7,688)	(2,128)	(14,442)	(171,833)
Debt-to-equity swap		(154,094)	(181,136)	-	(9,091)	(2,591)	(142,024)	(488,936)
Foreign exchange differences		-	-	-	(60,073)	(23)	(38,422)	(98,518)
Others		(67,680)	8,810	-	(12,657)	(62,934)	(9,856)	(144,317)
Ending balance	₩	1,594,886	598,972	4,232	498,437	494,638	324,288	3,515,453

(In millions of won)

13. Loans and Allowance for Loan Losses, Continued

(3) Losses related to loans for the year ended December 31, 2017 are as follows:

		2017
Provision for allowance for loan losses	₩	(1,212,184)
Gains on disposal of loan		(85,453)
	₩	(1,297,637)

(4) Changes in net deferred loan origination costs and fees for the year ended December 31, 2017 are as follows:

		2017
Beginning balance	₩	2,231
New deferrals		19,939
Amortization		(16,806)
Ending balance	₩	5,364

(In millions of won)

14. 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.

(1) The notional amounts outstanding for derivative contracts and the carrying amounts of the derivative financial instruments as of December 31, 2018 and 2017 are as follows:

		December 31, 2018			
		Notional amounts		Carrying amounts	
		Buy	Sell	Asset	Liability
Trading purpose derivative financial instruments:					
Interest rate					
Futures	₩	-	689,556	-	-
Swaps		225,288,933	225,286,744	1,023,803	770,507
Options		3,522,037	9,170,743	78,355	143,062
		228,810,970	235,147,043	1,102,158	913,569
Currency					
Futures		16,772	-	-	-
Forwards		62,436,615	54,638,533	719,837	726,742
Swaps		45,150,654	49,795,131	1,244,551	1,157,205
Options		185,957	80,891	771	1,643
		107,789,998	104,514,555	1,965,159	1,885,590
Stock					
Futures		1,515	-	-	-
Forwards		-	500,000	128,063	-
Options		182,777	335,551	11,590	763
		184,292	835,551	139,653	763
Allowance and other adjustments		-	-	(13,515)	(483)
		336,785,260	340,497,149	3,193,455	2,799,439
Hedging purpose derivative financial instruments:					
Interest rate (*)					
Swaps		24,015,803	24,015,803	608,887	160,612
Currency					
Swaps		7,065,363	7,339,952	73,769	277,798
Allowance and other adjustments		-	-	(203)	(5,221)
		31,081,166	31,355,755	682,453	433,189
	₩	367,866,426	371,852,904	3,875,908	3,232,628

(*) The expected maximum period for which derivative contracts, applied the cash flow hedge accounting, are exposed to risk of cash flow fluctuation is until September 11, 2020.

(In millions of won)

14. Derivative Financial Instruments, Continued

		December 31, 2017			
		Notional amounts		Carrying amounts	
		Buy	Sell	Asset	Liability
Trading purpose derivative financial instruments:					
Interest rate	₩	263,106,943	269,454,550	1,094,066	1,048,654
Currency		95,220,871	94,686,514	4,401,846	4,371,560
Stock		706,531	1,777,606	491	2,436
Commodities		1,232	1,232	375	375
Embedded derivatives		657,821	250,000	138,350	-
Allowance and other adjustments		-	-	(6,993)	(542)
		359,693,398	366,169,902	5,628,135	5,422,483
Hedging purpose derivative financial instruments:					
Interest rate		17,225,203	17,225,203	503,659	209,708
Currency		6,606,163	6,819,227	118,012	281,193
Allowance and other adjustments		-	-	(197)	(5,581)
		23,831,366	24,044,430	621,474	485,320
	₩	383,524,764	390,214,332	6,249,609	5,907,803

(2) The notional amounts outstanding for the hedging instruments by period as of December 31, 2018 are as follows:

		December 31, 2018					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Interest rate:							
Notional amounts outstanding	₩	151,977	1,151,615	1,899,050	11,752,405	9,060,756	24,015,803
Currency:							
Notional amounts outstanding	₩	-	53,711	1,777,382	4,821,900	412,370	7,065,363

(3) Details of the balances of the hedging instruments by risk type as of December 31, 2018 are as follows:

		December 31, 2018				
		Notional amounts		Balances		Changes in fair value for 2018
		Buy	Sell	Assets	Liabilities	
Cash flow hedge accounting:						
Interest rate risk						
Swaps	₩	1,250,000	1,250,000	65	3,831	4,392
Fair value hedge accounting:						
Interest rate risk						
Swaps		22,765,803	22,765,803	608,822	156,781	78,830
Currency risk						
Swaps		7,065,363	7,339,952	73,769	277,798	(240,893)
		29,831,166	30,105,755	682,591	434,579	(162,063)
	₩	31,081,166	31,355,755	682,656	438,410	(157,671)

(In millions of won)

14. Derivative Financial Instruments, Continued

(4) Details of the balances of the hedged items by risk type as of December 31, 2018 are as follows:

		December 31, 2018					
		Carrying amounts		Change in value of the hedged item		Changes in fair value for 2018	Cash flow hedge reserve
		Assets	Liabilities	Assets	Liabilities		
Cash flow hedge accounting:							
Interest rate risk							
Debt debentures	₩	-	1,250,000	-	-	-	(2,579)
Fair value hedge accounting:							
Interest rate risk							
Securities measured at FVOCI		1,430,733	-	(6,070)	-	(1,682)	-
Debt debentures		-	22,750,065	-	(238,234)	(74,840)	-
Other liabilities (Deposits, etc.)		-	105,611	-	(6,199)	4,386	-
		1,430,733	22,855,676	(6,070)	(244,433)	(72,136)	-
Currency risk							
Debt debentures		-	7,184,750	-	(227,240)	236,445	-
		1,430,733	30,040,426	(6,070)	(471,673)	164,309	-
	₩	1,430,733	31,290,426	(6,070)	(471,673)	164,309	(2,579)

(5) Details of hedge ineffectiveness recognized in profit or loss from derivatives for the year ended December 31, 2018 is as follows:

		2018
		Hedge ineffectiveness recognized in profit or loss
Interest rate risk	₩	6,694
Currency risk		(4,448)
	₩	2,246

(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 year ended December 31, 2018 is as follows:

		2018		
		Change in the value of the hedging instrument recognized in other comprehensive income	Hedge ineffectiveness recognized in profit or loss (*1)	Amount reclassified from other comprehensive income to profit or loss (*1)
Interest rate risk	₩	4,283	109	47

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

(In millions of won)

15. Investments in Subsidiaries and Associates

(1) Investments in subsidiaries and associates as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Subsidiaries:			
KDB Asia Ltd.	₩	214,807	214,807
KDB Bank Europe Ltd.		151,952	151,952
KDB Ireland Ltd.		62,389	62,389
KDB Bank Uzbekistan Ltd.		47,937	47,937
Banco KDB Do Brazil S.A.		43,642	35,848
Daewoo Shipbuilding & Marine Engineering Co., Ltd. (*1)		2,029,845	15,124
Daehan Shipbuilding Co., Ltd. (*2)		-	-
KDB Capital Corporation		597,290	597,290
Korea BTL Financing 1		181,840	194,101
Korea Railroad Financing 1		101,667	152,692
Korea Education Financing		59,843	63,947
KDB Infrastructure Investment Asset Management Co., Ltd.		16,843	16,843
Korea Infrastructure Financing Co. (*3)		6,663	8,422
KDB Value PEF VI (*4)		385,017	599,982
KDB Consus Value PEF (*5)		411,154	110,823
KDB Sigma PEF II		129,330	129,330
KDB Value PEF VII		50,680	85,566
KDB-IAP OBOR PEF		34,140	34,140
Nvestor 2016 PEF		24,280	24,280
KDB Asia PEF		22,571	14,784
KDB Small Medium Mezzanine PEF		12,140	-
Others		2,357	3,382
		4,586,387	2,563,639
Associates**:**			
Korea Electric Power Co., Ltd.		16,921,067	16,921,067
Korea Shipping and Maritime Transportation Co., Ltd.		500,000	452,500
Korea Tourism Organization		337,286	337,286
Korea Infrastructure Financing 2 Co.		220,850	221,468
Korea Ocean Business Corporation		134,307	-
Korea Maritime Guarantee Insurance Co., Ltd.		-	134,856
Korea Appraisal Board		58,492	58,492
Multi Asset Electronic Power PEF		40,358	42,997
Shinbundang Railroad Co., Ltd. (*6)		8,821	18,065
Troika Resources Investment PEF (*7)		8,850	9,035
Hyundai Merchant Marine Co., Ltd. (*8)		78,835	78,835
GM Korea Company (*9)		450,585	-
Others (*10)		2,085,092	1,911,149
		20,844,543	20,185,750
	₩	25,430,930	22,749,389

15. Investments in Subsidiaries and Associates, Continued

(*1) The Bank decided to sell off all of its shares in DSME and entered into the agreement for the sell-off with Hyundai Heavy Industries Co., Ltd. in March 2019. Measuring recoverable amounts of the shares as fair value less disposal costs based on the agreement, the Bank recognized ₩2,014,720 million of the reversal of impairment losses for the year ended December 31, 2018. Meanwhile, to finalize the agreement, the uncertainty such that some prerequisites should be met may exsit referring to Note 56. Considering the DSME's financial difficulty due to a decrease in the possibility of increase in contract price for additional works and an unexpected increase in contract costs in offshore plants as objective evidence of impairment, the Bank recognized ₩90,509 million of impairment losses for the year ended December 31, 2017.

(*2) The Bank recognized ₩1,522 million of impairment losses for the year ended December 31, 2017, considering the decrease in the value in use of assets held due to the decline in expected cash flows as objective evidence of impairment.

(*3) The Bank recognized ₩32 million and ₩1,977 million of impairment losses for the years ended December 31, 2018 and 2017, respectively, considering the decline in net asset values due to the decrease in fair value of assets held as objective evidence of impairment.

(*4) The Bank recognized ₩250,793 million and ₩517,040 million of impairment losses for the years ended December 31, 2018 and 2017, respectively, considering the decrease in the value in use of cash-generating units due to the decline in expected cash flows from Daewoo Engineering & Construction Co., Ltd. as an objective evidence of impairment.

(*5) The Bank invested in ₩300,331 million of additional shares participating in right offering of KDB Life Insurance Co. referred to existing shareholders for the year ended December 31, 2018. Considering the decline in the value in use of KDB Life Insurance Co., Ltd. due to reduced rates of return on investments, decline in persistency rate, and other changes in actuarial assumptions as objective evidence of impairment, the Bank recognized ₩103,101 million of impairment losses for the year ended December 31, 2017.

(*6) Considering the encroachment of capital flow due to the delayed opening of railway and uncollected deposit of operating income as objective evidence of impairment, the Bank recognized ₩9,245 million and ₩6,998 million of impairment losses for the years ended December 31, 2018 and 2017, respectively.

(*7) Considering the decrease in the value in use of assets held due to the decline in expected cash flows as an objective evidence of impairment, the Bank recognized ₩185 million and ₩4,155 million of impairment losses for the years ended December 31, 2018 and 2017, respectively.

(*8) The Bank acquired additional 15,761,836 shares with voting rights of Hyundai Merchant Marine Co., Ltd. amounting to ₩78,809 million due to capital increase by allocation to stockholders for the year ended December 31, 2017.

(*9) According to Agreement of Management normalization on GM Korea Company, the Bank acquired 23,813,762 preferred shares. Additionally considering the decrease in the value in use of cash-generating units due to the decline in expected cash flows as an objective evidence of impairment, the Bank recognized ₩358,440 million of impairment losses for the year ended December 31, 2018.

(*10) The Bank recognized ₩55,074 million of impairment losses for KoFC STIC Growth Champ No. 2010-2 PEF and 25 other companies for the year ended December 31, 2018. The Bank recognized ₩48,608 million of impairment losses for KoFC Mirae Asset Growth Champ 2010-4 PEF and 18 other companies for the year ended December 31, 2017.

(In millions of won)

15. Investments in Subsidiaries and Associates, Continued

(2) The market value of marketable investments in subsidiaries and associates as of December 31, 2018 and 2017 are as follows:

		Market value		Carrying amounts	
		December 31, 2018	**December 31, 2017**	**December 31, 2018**	**December 31, 2017**
Korea Electric Power Co., Ltd.	₩	6,991,887	8,058,625	16,921,067	16,921,067
Daewoo Shipbuilding & Marine Engineering Co., Ltd.		2,040,060	830,361	2,029,845	15,124
Hyundai Merchant Marine Co., Ltd.		152,231	206,820	78,835	78,835
Dongbu Steel Co., Ltd.		68,880	69,229	19	13

(In millions of won)

15. Investments in Subsidiaries and Associates, Continued

(3) The key financial information of subsidiaries and associates invested and ownership ratios as of December 31, 2018 and 2017 are as follows:

	December 31, 2018									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Subsidiaries:										
KDB Asia Ltd.	Hong Kong	December	Finance	₩ 1,956,143	1,615,419	340,724	84,594	19,153	30,281	100.00
KDB Bank Europe Ltd.	Hungary	December	Finance	917,265	835,739	81,526	85,749	2,478	(398)	100.00
KDB Ireland Ltd.	Ireland	December	Finance	460,344	373,580	86,764	26,832	7,245	7,190	100.00
KDB Bank Uzbekistan Ltd.	Uzbekistan	December	Finance	633,731	568,471	65,260	26,901	8,993	10,400	86.32
Banco KDB Do Brazil S.A.	Brazil	December	Finance	328,486	256,040	72,446	149,042	11,764	2,641	100.00
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Korea	December	Manufacturing	11,918,522	8,078,300	3,840,222	9,644,384	344,722	332,469	55.72
Shinhan Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing	331,754	290,565	41,189	252,022	13,592	12,284	89.22
Sam Woo Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing	271,540	238,267	33,273	116,797	107	89	100.00
Daehan Shipbuilding Co., Ltd. (*1)	Korea	December	Manufacturing	620,478	736,212	(115,734)	521,071	(52,747)	(54,366)	70.04
KDB Capital Corporation	Korea	December	Specialized Credit Finance	5,594,986	4,694,534	900,452	480,479	121,616	121,110	99.92
Korea BTL Financing 1 (*2)	Korea	Semi-annually	Financial investment	439,795	301	439,494	17,279	15,913	15,913	41.67
Korea Railroad Financing 1 (*2)	Korea	Semi-annually	Financial investment	203,497	9	203,488	5,635	5,081	5,081	50.00
Korea Education Financing (*2)	Korea	Semi-annually	Financial investment	120,183	7	120,176	4,938	4,614	4,614	50.00
KDB Infrastructure Investment Asset Management Co., Ltd.	Korea	December	Asset management	47,347	8,617	38,730	31,468	17,705	17,655	84.16
Korea Infrastructure Financing Co.	Korea	December	Financial investment	7,655	6	7,649	671	580	580	85.00
KDB Value PEF VI	Korea	December	Financial investment	9,358,161	7,578,192	1,779,969	10,733,868	(99,183)	(111,750)	99.84
KDB Consus Value PEF	Korea	December	Financial investment	18,700,778	17,896,897	803,881	3,909,771	51,684	171,878	68.20
KDB Sigma PEF II	Korea	December	Financial investment	220,445	543	219,902	994	(1,215)	(1,958)	60.00
KDB Value PEF VII (*3)	Korea	December	Financial investment	96,390	3,226	93,164	40,487	12,973	18,127	50.00
KDB-IAP OBOR PEF (*3)	Korea	December	Financial investment	146,697	49,982	96,715	-	6,870	10,885	33.52
Nvestor 2016 PEF	Korea	December	Financial investment	70,452	25,252	45,200	29,149	8,711	8,711	80.00
KDB Asia PEF (*3)	Korea	December	Financial investment	42,549	200	42,349	-	(4,643)	616	50.00
KDB Small Medium Mezzanine PEF	Korea	December	Financial investment	17,968	1,278	16,690	7	(1,520)	(1,520)	66.67
KoFC-KBIC Frontier Champ 2010-5 PEF (*3)	Korea	December	Financial investment	469	3	466	1,460	1,453	1,453	50.00
Components and Materials M&A PEF	Korea	December	Financial investment	1,136	1,812	(676)	4	(26)	(26)	83.33

(In millions of won)

15. Investments in Subsidiaries and Associates, Continued

	December 31, 2018									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Subsidiaries:										
KDB Venture M&A PEF	Korea	December	Financial investment	₩ 120	7,910	(7,790)	-	-	-	57.56
KDBC IP Investment Fund 2 (*3)	Korea	December	Financial investment	10,096	3,085	7,011	1,143	712	712	33.33
KoFC-KDBC Pioneer Champ 2010-4 Venture Investment Fund (*3)	Korea	December	Financial investment	6,050	2	6,048	1,432	(394)	(394)	50.00
Associates:										
Korea Electric Power Co., Ltd.	Korea	December	Electricity Generation	185,249,061	114,156,299	71,092,762	60,627,610	(1,314,567)	(1,426,477)	32.90
Korea Shipping and Maritime Transportation Co., Ltd.	Korea	December	Transportation Leasing	1,062,673	9,060	1,053,614	24,840	199,796	189,062	50.00
Korea Tourism Organization	Korea	December	Culture and Tourism administration	1,428,674	370,333	1,058,341	738,061	9,053	5,690	43.58
Korea Infrastructure Financing 2 Co.	Korea	December	Financial investment	850,334	32,069	818,265	61,021	54,008	54,008	26.67
Korea Ocean Business Corporation (*8)	Korea	December	Financial investment	2,715,960	344,344	2,371,616	30,663	(195,474)	(200,715)	4.62
Korea Appraisal Board	Korea	December	Appraisal	257,206	47,221	209,985	151,023	8,598	7,561	30.60
GM Korea Company (*4)	Korea	December	Manufacturing	6,128,492	3,862,366	2,266,126	9,341,988	(833,987)	(828,248)	17.02
Hyundai Merchant Marine Co., Ltd. (*5)	Korea	December	Foreign cargo transportation	4,121,440	3,081,769	1,039,671	5,222,124	(790,739)	(807,995)	13.05
Multi Asset Electronic Power PEF	Korea	December	Financial investment	79,224	743	78,481	5,686	5,468	5,468	50.00
Shinbundang Railroad Co., Ltd. (*6)	Korea	December	Other	725,065	976,609	(251,544)	87,340	(33,762)	(33,762)	10.98
Troika Resources Investment PEF (*7)	Korea	December	Financial investment	21,201	6,228	14,973	65	(2,482)	(2,482)	54.94

(In millions of won)

15. Investments in Subsidiaries and Associates, Continued

	December 31, 2017									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Subsidiaries:										
KDB Asia Ltd.	Hong Kong	December	Finance	₩ 1,481,387	1,171,441	309,946	76,587	22,762	(16,026)	100.00
KDB Bank Europe Ltd.	Hungary	December	Finance	873,868	793,699	80,169	46,576	6,096	6,917	100.00
KDB Ireland Ltd.	Ireland	December	Finance	399,436	320,670	78,766	21,616	7,606	(1,212)	100.00
KDB Bank Uzbekistan Ltd.	Uzbekistan	December	Finance	745,374	677,237	68,137	90,386	60,790	(42,187)	86.32
Banco KDB Do Brazil S.A.	Brazil	December	Finance	363,222	293,418	69,804	140,860	10,046	1,048	100.00
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Korea	December	Manufacturing	11,446,753	8,456,091	2,990,662	11,101,818	621,492	527,133	56.01
Shinhan Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing	315,526	286,621	28,905	46,853	3,165	2,378	89.22
Sam Woo Heavy Industries Co., Ltd. (*1)	Korea	December	Manufacturing	281,704	248,520	33,184	38,824	(3,361)	(3,457)	100.00
Daehan Shipbuilding Co., Ltd. (*1)	Korea	December	Manufacturing	543,676	602,057	(58,381)	438,857	(6,352)	(6,352)	70.04
KDB Capital Corporation	Korea	December	Specialized Credit Finance	5,078,188	4,281,709	796,479	429,661	115,107	93,859	99.92
Korea BTL Financing 1 (*2)	Korea	Semi-annually	Financial investment	469,776	321	469,455	18,526	17,072	17,072	41.67
Korea Railroad Financing 1 (*2)	Korea	Semi-annually	Financial investment	309,417	12	309,405	13,879	13,040	13,040	50.00
Korea Education Financing (*2)	Korea	Semi-annually	Financial investment	128,391	7	128,384	5,011	4,668	4,668	50.00
KDB Infrastructure Investment Asset Management Co., Ltd.	Korea	December	Asset management	38,805	6,729	32,076	25,456	13,418	13,480	84.16
Korea Infrastructure Financing Co.	Korea	December	Financial investment	9,775	6	9,769	865	751	751	85.00
KDB Value PEF VI	Korea	December	Financial investment	9,797,318	7,732,081	2,065,237	12,068,750	(458,586)	(483,214)	99.84
KDB Consus Value PEF	Korea	December	Financial investment	17,331,649	17,089,983	241,666	4,515,023	49,595	(14,937)	58.08
KDB Sigma PEF II	Korea	December	Financial investment	222,435	574	221,861	2	4,595	4,525	60.00
KDB Value PEF VII (*3)	Korea	December	Financial investment	214,051	62,087	151,964	15,766	10,027	(3,105)	50.00
KoFC-KBIC Frontier Champ 2010-5 PEF (*3)	Korea	December	Financial investment	15,017	3	15,014	2,131	(294)	18	50.00
KTB Korea-Australia Global Cooperation PEF	Korea	December	Financial investment	1,286	5	1,281	2	1,861	1,861	95.00
KDB Asia PEF (*3)	Korea	December	Financial investment	26,353	195	26,158	-	(2,619)	(4,466)	50.00
Components and Materials M&A PEF	Korea	December	Financial investment	1,162	1,812	(650)	4	(2,251)	4,712	83.33
KDB Venture M&A PEF	Korea	December	Financial investment	120	7,910	(7,790)	-	-	-	57.56
KDB-IAP OBOR PEF (*3)	Korea	December	Financial investment	140,592	47,894	92,698	-	(1,598)	(8,062)	33.52

(In millions of won)

15. Investments in Subsidiaries and Associates, Continued

	December 31, 2017									
	Country	Fiscal year end	Industry	Assets	Liabilities	Equity	Operating revenue	Net income (loss)	Total comprehensive income (loss)	Ownership (%)
Subsidiaries:										
Nvestor 2016 PEF	Korea	December	Financial investment	₩ 62,384	25,886	36,498	13,717	96	96	80.00
KDBC IP Investment Fund 2 (*3)	Korea	December	Financial investment	9,398	3,000	6,398	2,167	2,162	1,776	33.33
KoFC-KDBC Pioneer Champ 2010-4 Venture Investment Fund (*3)	Korea	December	Financial investment	11,621	179	11,442	3,410	3,227	1,571	50.00
Associates:										
Korea Electric Power Co., Ltd.	Korea	December	Electricity Generation	181,788,915	108,824,274	72,964,641	59,814,862	1,298,720	1,230,194	32.90
Korea Shipping and Maritime Transportation Co., Ltd.	Korea	December	Transportation Leasing	765,050	5,122	759,928	39,671	(155,690)	(144,956)	50.00
Korea Tourism Organization	Korea	December	Culture and Tourism administration	1,402,083	359,898	1,042,185	732,967	20,934	17,383	43.58
Korea Infrastructure Financing 2 Co.	Korea	December	Financial investment	829,503	9,885	819,618	29,627	43,704	43,704	26.67
GM Korea Company (*4)	Korea	December	Manufacturing	6,008,278	7,626,156	(1,617,878)	10,913,237	(1,626,576)	(1,629,680)	17.02
Hyundai Merchant Marine Co., Ltd. (*5)	Korea	December	Foreign cargo transportation	3,602,418	2,705,498	896,920	5,028,016	(1,218,503)	(1,325,963)	13.13
Korea Appraisal Board	Korea	December	Appraisal	248,358	42,180	206,178	142,738	8,662	6,818	30.60
Korea Maritime Guarantee Insurance Co., Ltd.	Korea	December	Finance	331,270	19,051	312,219	14,135	(1,920)	(1,859)	41.88
Multi Asset Electronic Power PEF	Korea	December	Financial investment	84,417	805	83,612	847	5,833	5,833	50.00
Shinbundang Railroad Co., Ltd. (*6)	Korea	December	Other	755,225	973,007	(217,782)	83,125	(55,814)	(55,814)	10.98
Troika Resources Investment PEF (*7)	Korea	December	Financial investment	30,895	4,106	26,789	3,406	3,834	3,834	54.94

15. Investments in Subsidiaries and Associates, Continued

(*1) The Bank consolidates directly the investee which was a subsidiary of Daewoo Shipbuilding & Marine Engineering Co., Ltd. as it has control over the investee through the commencement of the administrative proceeding for the year ended December 31, 2017.

(*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 in GM Korea Company is less than 20%, the equity method is applied as the Bank is considered to have significant influence over GM Korea Company by exercising rights to elect board of directors.

(*5) Although the Bank's shareholding in Hyundai Merchant Marine Co., Ltd. is less than 20%, the Bank is considered to have significant influence as the principal creditor bank of Hyundai Merchant Marine Co., Ltd.

(*6) The shareholding is above 20% upon the consideration of shares owned by the Bank's subsidiaries. Therefore, the Bank exercises significant influence over the associate.

(*7) Although the Bank's shareholding in Troika Resources Investment PEF is above 50%, the Bank as joint managing member doesn't have the ability to direct the relevant activities unilaterally.

(*8) Although the Bank's shareholding in Korea Ocean Business Corporation is less than 20%, the Bank is considered to have significant influence over the associate.

(In millions of won)

16. Property and Equipment

Changes in property and equipment for the years ended December 31, 2018 and 2017 are as follows:

		2018					
		January 1, 2018	Acquisition/ depreciation	Disposal	Reclassifi- cation	Foreign exchange differences	December 31, 2018
Acquisition cost:							
Land	₩	250,461	557	(82)	61,973	16	312,925
Buildings and structures		388,423	7,697	(276)	2,683	40	398,567
Leasehold improvements		39,870	4,270	(3,141)	-	(107)	40,892
Vehicles		927	-	(108)	-	12	831
Equipment		51,773	2,515	(1,695)	-	87	52,680
Construction in progress		79,032	85,607	-	(56,052)	-	108,587
Others		141,822	31,772	(1,195)	-	79	172,478
		952,308	132,418	(6,497)	8,604	127	1,086,960
Accumulated depreciation:							
Buildings and structures (*)		165,607	11,474	(84)	1,435	35	178,467
Leasehold improvements		31,684	4,023	(3,030)	-	(176)	32,501
Vehicles		860	35	(97)	-	11	809
Equipment (*)		42,920	2,785	(1,017)	-	59	44,747
Others		112,969	14,622	(1,191)	-	50	126,450
		354,040	32,939	(5,419)	1,435	(21)	382,974
Accumulated impairment losses:							
Land		3,023	-	-	-	-	3,023
Buildings and structures		2,361	-	-	-	-	2,361
		5,384	-	-	-	-	5,384
	₩	592,884	99,479	(1,078)	7,169	148	698,602

(*) The amounts include government grants.

(In millions of won)

16. Property and Equipment, Continued

		2017					
		January 1, 2017	Acquisition/ depreciation	Disposal	Reclassifi-cation	Foreign exchange differences	December 31, 2017
Acquisition cost:							
Land	₩	249,180	51	(121)	1,372	(21)	250,461
Buildings and structures		381,918	4,374	(468)	2,653	(54)	388,423
Leasehold improvements		39,307	2,194	(1,076)	-	(555)	39,870
Vehicles		1,395	-	(403)	-	(65)	927
Equipment		50,851	1,613	(405)	52	(338)	51,773
Construction in progress		63,042	17,899	-	(1,909)	-	79,032
Others		128,991	13,204	(137)	-	(236)	141,822
		914,684	39,335	(2,610)	2,168	(1,269)	952,308
Accumulated depreciation:							
Buildings and structures (*)		154,438	11,016	(160)	361	(48)	165,607
Leasehold improvements		28,982	4,145	(1,076)	-	(367)	31,684
Vehicles		1,244	79	(403)	-	(60)	860
Equipment (*)		40,589	2,981	(388)	-	(262)	42,920
Others		102,141	11,097	(135)	-	(134)	112,969
		327,394	29,318	(2,162)	361	(871)	354,040
Accumulated impairment losses:							
Land		3,023	-	-	-	-	3,023
Buildings and structures		2,361	-	-	-	-	2,361
		5,384	-	-	-	-	5,384
	₩	581,906	10,017	(448)	1,807	(398)	592,884

(*) The amounts include government grants.

(In millions of won)

17. Investment Property

Changes in investment property for the years ended December 31, 2018 and 2017 are as follows:

		2018			
		January 1, 2018	Acquisition/ depreciation	Reclassification	December 31, 2018
Acquisition cost:					
Land	₩	58,843	-	(5,921)	52,922
Buildings and structures		42,577	1,908	(2,683)	41,802
		101,420	1,908	(8,604)	94,724
Accumulated depreciation:					
Buildings and structures		20,054	2,011	(1,435)	20,630
Accumulated impairment losses:					
Land		1,197	-	-	1,197
Buildings and structures		1,778	-	-	1,778
		2,975	-	-	2,975
	₩	78,391	(103)	(7,169)	71,119

		2017			
		January 1, 2017	Acquisition/ depreciation	Reclassification	December 31, 2017
Acquisition cost:					
Land	₩	60,215	-	(1,372)	58,843
Buildings and structures		43,373	-	(796)	42,577
		103,588	-	(2,168)	101,420
Accumulated depreciation:					
Buildings and structures		18,396	2,019	(361)	20,054
Accumulated impairment losses:					
Land		1,197	-	-	1,197
Buildings and structures		1,778	-	-	1,778
		2,975	-	-	2,975
	₩	82,217	(2,019)	(1,807)	78,391

The fair value of the Bank's investment property, as determined based on valuation by an independent appraiser, amounts to ₩77,890 million and ₩85,375 million as of December 31, 2018 and 2017, respectively. Additionally, fair value of investment in property is classified as level 3 according to the fair value hierarchy in Note 51.

(In millions of won)

18. Intangible Assets

Changes in intangible assets for the years ended December 31, 2018 and 2017 are as follows:

		2018					
		January 1, 2018	Acquisition	Disposal	Amortization	Foreign exchange differences	December 31, 2018
Development expense	₩	67,920	95,746	-	(13,066)	-	150,600
Equipment usage right		626	-	-	(55)	22	593
Other deposits provided		11,431	-	-	-	4	11,435
Others		10,525	5,609	-	(4,878)	2	11,258
	₩	90,502	101,355	-	(17,999)	28	173,886

		2017					
		January 1, 2017	Acquisition	Disposal	Amortization	Foreign exchange differences	December 31, 2017
Development expense	₩	36,338	46,708	-	(15,126)	-	67,920
Equipment usage right		791	-	(72)	(57)	(36)	626
Other deposits provided		11,442	-	(2)	-	(9)	11,431
Others		10,184	5,888	-	(5,491)	(56)	10,525
	₩	58,755	52,596	(74)	(20,674)	(101)	90,502

19. Other Assets

Other assets as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Accounts receivable	₩	2,092,331	4,837,465
Unsettled domestic exchange receivables		1,741,236	2,144,474
Accrued income		433,207	453,712
Guarantee deposits		147,528	152,917
Financial guarantee asset		22,638	23,371
Prepaid expenses		3,461	3,253
Advance payments		16,029	12,244
Others		97,862	76,759
		4,554,292	7,704,195
Allowance for credit losses		(242,113)	(236,203)
Present value discount		(2,712)	(2,551)
	₩	4,309,467	7,465,441

The carrying amounts of financial assets included in other assets above amounted to ₩4,200,101 million and ₩7,378,355 million as of December 31, 2018 and 2017, respectively, and their fair value amounted to ₩4,203,448 million and ₩7,382,912 million as of December 31, 2018 and 2017, respectively.

(In millions of won)

20. Assets Held for Sale

The Bank as the principal creditor bank of STX Engine Co., Ltd. and STX Corporation decided to sell its stake in STX Engine Co., Ltd. and STX Corporation in accordance with a resolution adopted by the council of financial creditors. During 2017, the council of financial creditors has selected UAMCO., Ltd. and AFC Korea Ltd. as the priority negotiation partners of STX Engine Co., Ltd. and STX Corporation, respectively. These sales of the Bank's stake in STX Engine Co., Ltd. and STX Corporation have been completed during 2018.

Assets held for sale as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Assets held for sale:			
Investments in subsidiaries and associates	₩	-	58,473

21. Financial Liabilities Measured at FVTPL

(1) Financial liabilities designated at fair value through profit or loss as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Debentures	₩	2,164,538	1,583,713

Changes in fair value of structured debentures 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 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, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Carrying amount	₩	2,164,538	1,583,713
Contractual cash flow amounts		2,040,344	1,511,996
Difference	₩	124,194	71,717

(In millions of won)

22. Deposits

Deposits as of December 31, 2018 and 2017 are as follows:

		December 31, 2018		December 31, 2017	
		Amortized cost	Fair value	Amortized cost	Fair value
Deposits in Korean won:					
Demand deposits	₩	103,253	103,253	92,588	92,588
Time and savings deposits		25,150,481	25,162,058	24,736,965	24,722,973
Certificates of deposit		52,457	52,481	1,510,343	1,510,197
		25,306,191	25,317,792	26,339,896	26,325,758
Deposits in foreign currencies:					
Demand deposits		1,227,972	1,227,972	1,396,322	1,396,322
Time and savings deposits		2,125,103	2,125,079	2,553,348	2,552,337
Certificates of deposit		3,224,849	3,219,921	2,388,267	2,388,049
		6,577,924	6,572,972	6,337,937	6,336,708
Off-shore deposits in foreign currencies:					
Demand deposits		561,660	561,660	380,346	380,346
	₩	32,445,775	32,452,424	33,058,179	33,042,812

23. Borrowings

(1) Borrowings as of December 31, 2018 and 2017 are as follows:

	December 31, 2018				
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Borrowings in Korean won	-	3.28	₩	3,988,353	3,989,389
Borrowings in foreign currencies	-	5.50		11,493,651	11,535,443
Off-shore borrowings in foreign currencies	1.46	4.32		1,332,718	1,335,672
Others	0.15	5.30		2,995,519	2,995,500
				19,810,241	19,856,004
Deferred borrowing costs				(500)	
			₩	19,809,741	

	December 31, 2017				
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Borrowings in Korean won	-	3.28	₩	4,789,607	4,788,758
Borrowings in foreign currencies	0.05	5.50		10,573,215	10,624,837
Off-shore borrowings in foreign currencies	0.69	4.32		1,302,512	1,304,341
Others	0.01	5.30		4,307,593	4,307,428
				20,972,927	21,025,364
Deferred borrowing costs				(1,298)	
			₩	20,971,629	

(In millions of won)

23. Borrowings, Continued

(2) Borrowings in Korean won before adjusting for gains and losses on deferred borrowing costs as of December 31, 2018 and 2017 are as follows:

Lender	Classification	Annual interest rate (%)		December 31, 2018	December 31, 2017
Ministry of Strategy and Finance	Borrowings from government fund (*1)	1.48 ~ 1.98	₩	193,790	248,829
Industrial Bank of Korea	Borrowings from IT industry promotion fund	0.10 ~ 1.00		920	3,183
Small & Medium Business Corp.	Borrowings from small and medium enterprise promotion fund	0.70 ~ 3.04		87,023	104,161
Ministry of Culture and Tourism	Borrowings from tourism promotion fund	0.02 ~ 2.50		2,665,403	2,563,235
Korea Energy Management Corporation	Borrowings from fund for rational use of energy	0.25 ~ 3.10		551,411	648,512
Local governments	Borrowings from local small and medium enterprise promotion fund	0.00 ~ 3.28		53,420	64,056
The Bank of Korea	Borrowings from Bank of Korea	0.50 ~ 0.75		113,825	871,314
Others	Borrowings from petroleum enterprise fund and others	0.00 ~ 3.15		322,561	286,317
			₩	3,988,353	4,789,607

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

(In millions of won)

23. 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, 2018 and 2017 are as follows:

Lender	Classification	Annual interest rate (%)		December 31, 2018	December 31, 2017
Japan Bank for International Cooperation ("JBIC")	Borrowings from JBIC	1.73 ~ 2.16	₩	139,187	154,063
Mizuho and others	Bank loans from foreign funds	3M Libor + 0.25 ~ 3M Libor + 0.78		1,118,100	1,285,680
Ministry of Strategy and Finance	Exchange equalization fund borrowings in foreign currencies	3M Libor + 0.22 ~ 3M Libor + 0.74		910,878	1,809,558
Central Bank of the Republic Uzbekistan and others	Off-shore short term borrowings	1.46 ~ 2.57		875,783	1,069,868
HSBC and others	Off-shore long term borrowings	3M Libor + 0.50 ~ 3M Libor + 0.62		444,159	214,280
JBIC	Off-shore borrowings from JBIC	4.27 ~ 4.32		12,776	18,364
Others	Short-term borrowings in foreign currencies	0.05 ~ 5.45		7,881,995	5,724,739
	Long term borrowings in foreign currencies	0.12 ~ 3.21		1,443,491	1,599,175
			₩	12,826,369	11,875,727

(In millions of won)

24. Debentures

Debentures as of December 31, 2018 and 2017 are as follows:

	December 31, 2018				
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Debentures in Korean won:					
Debentures	1.30	6.90	₩	95,431,251	96,161,132
Discount on debentures				(53,254)	
Premium on debentures				114	
Valuation adjustment for fair value hedges				(35,014)	
				95,343,097	
Debentures in foreign currencies:					
Debentures	0.02	6.97		13,811,420	13,615,184
Discount on debentures				(29,804)	
Valuation adjustment for fair value hedges				(160,279)	
				13,621,337	
Off-shore debentures:					
Debentures	-	7.73		10,617,785	10,349,626
Discount on debentures				(26,037)	
Valuation adjustment for fair value hedges				(270,181)	
				10,321,567	
			₩	119,286,001	120,125,942

	December 31, 2017				
	Minimum interest rate (%)	Maximum interest rate (%)		Amortized cost	Fair value
Debentures in Korean won:					
Debentures	1.29	6.90	₩	95,245,150	95,361,894
Discount on debentures				(47,122)	
Premium on debentures				203	
Valuation adjustment for fair value hedges				(227,991)	
				94,970,240	
Debentures in foreign currencies:					
Debentures	0.16	8.20		12,932,807	12,599,884
Discount on debentures				(33,802)	
Valuation adjustment for fair value hedges				(345,622)	
				12,553,383	
Off-shore debentures:					
Debentures	-	7.73		10,628,444	10,331,998
Discount on debentures				(24,660)	
Valuation adjustment for fair value hedges				(308,425)	
				10,295,359	
			₩	117,818,982	118,293,776

(In millions of won)

25. Defined Benefit Liabilities

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 as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Present value of defined benefit liabilities	₩	377,361	343,887
Fair value of plan assets		(315,210)	(298,240)
	₩	62,151	45,647

(2) Changes in defined benefit liabilities for the years ended December 31, 2018 and 2017 are as follows:

		2018		
		Present value of defined benefit obligation	Fair value of plan assets	Defined benefit liabilities
Beginning balance	₩	343,887	(298,240)	45,647
Current service costs		39,440	-	39,440
Interest expense (income)		10,604	(9,529)	1,075
Remeasurements of defined benefit liabilities:				
Demographic assumption		-	-	-
Financial assumption		8,460	5,255	13,715
Experience adjustment		(7,662)	-	(7,662)
		798	5,255	6,053
Payments from the plan		(17,368)	17,315	(53)
Contributions to the plan		-	(30,011)	(30,011)
Ending balance	₩	377,361	(315,210)	62,151

		2017		
		Present value of defined benefit obligation	Fair value of plan assets	Defined benefit liabilities
Beginning balance	₩	308,839	(265,122)	43,717
Current service costs		37,649	-	37,649
Interest expense (income)		8,771	(7,675)	1,096
Remeasurements of defined benefit liabilities:				
Demographic assumption		53	-	53
Financial assumption		(2,348)	3,764	1,416
Experience adjustment		1,885	-	1,885
		(410)	3,764	3,354
Payments from the plan		(10,828)	10,793	(35)
Contributions to the plan		-	(40,000)	(40,000)
Other		(134)	-	(134)
Ending balance	₩	343,887	(298,240)	45,647

(In millions of won)

25. Defined Benefit Liabilities, Continued

(3) Fair value of plan assets for each type as of December 31, 2018 and 2017 are as follows:

		December 31, 2018		December 31, 2017	
		Quoted market prices	Unquoted market prices	Quoted market prices	Unquoted market Prices
Due from banks	₩	-	315,210	-	298,240

(4) Defined benefit costs recognized in profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Current service costs	₩	39,440	37,649
Interest expense (income), net		1,075	1,096
	₩	40,515	38,745

(5) The principal actuarial assumptions used as of December 31, 2018 and 2017 are as follows:

	December 31, 2018	December 31, 2017
Discount rate (%)	2.77	3.25
Future salary increasing rate (%)	6.23	6.50

(6) The present value sensitivity of defined benefit liabilities as changes in principal actuarial assumptions as of December 31, 2018 is as follows:

	Sensitivity	
	1% increase in assumption	1% decrease in assumption
Discount rate	9.44% decrease	11.19% increase
Future salary increasing rate	10.48% increase	9.04% decrease

(7) The weighted average duration of defined benefit liabilities is 11.35 years and 11.14 years as of December 31, 2018 and 2017, respectively. The expected contributions to the plan for the next annual reporting period amount to ₩65,355 million and ₩ 25,718 million as of December 31, 2018 and 2017, respectively.

(In millions of won)

26. Provisions

(1) Changes in provisions for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Provision for payment guarantees	₩	469,684	445,946
Provision for unused commitments		111,181	135,321
Financial guarantee provision		787,765	638,222
Lawsuit provision		12,302	135,497
Other provision		7,786	8,965
	₩	1,388,718	1,363,951

(2) Changes in provision for unused commitments for the year ended December 31, 2018 are as follows:

		2018			
			Lifetime expected credit losses		
		12-month expected credit loss	Non credit-impaired	Credit-impaired	Total
Beginning balance	₩	17,718	447,095	19	464,832
Transfer to 12-month expected credit loss		212,697	(212,697)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(2,899)	2,899	-	-
Provision for (reversal of) unused commitments		46,748	(57,167)	(19)	(10,438)
Foreign currency translation		14,514	776	-	15,290
Ending balance	₩	288,778	180,906	-	469,684

(3) Changes of financial guarantee provision for the year ended December 31, 2018 are as follows:

		2018			
			Lifetime expected credit losses		
		12-month expected credit loss	Non credit-impaired	Credit-impaired	Total
Beginning balance	₩	1,763	72,267	73,458	147,488
Transfer to 12-month expected credit loss		76	(7)	(69)	-
Transfer to lifetime expected credit losses:					-
Transfer to non credit-impaired exposures		(443)	493	(50)	-
Transfer to credit-impaired exposures		(474)	(3,343)	3,817	-
Provision for (reversal of) unused commitments		472	(49)	(39,256)	(38,833)
Foreign currency translation		6	2,185	335	2,526
Ending balance	₩	1,400	71,546	38,235	111,181

(In millions of won)

26. Provisions, Continued

(4) Changes in provision for payment guarantees for the year ended December 31, 2018 are as follows:

		2018			
			Lifetime expected credit losses		
		12-month expected credit loss	Non credit-impaired	Credit-impaired	Total
Beginning balance	₩	9,512	426,421	208,078	644,011
Transfer to 12-month expected credit loss		71,411	(71,411)	-	-
Transfer to lifetime expected credit losses:					
Transfer to non credit-impaired exposures		(421)	1,171	(750)	-
Transfer to credit-impaired exposures		(12,804)	(23,216)	36,020	-
Provision for (reversal of) unused commitments		222,157	(95,542)	(4,887)	121,728
Foreign currency translation		3,091	10,098	8,837	22,026
Ending balance	₩	292,946	247,521	247,298	787,765

(5) Changes of lawsuit provision and other provision for the year ended December 31, 2018 are as follows:

		2018	
		Lawsuit provision	Other provision
Beginning balance	₩	135,497	8,965
Reversal of provision		(11)	-
Provision used		(123,184)	(1,179)
Ending balance	₩	12,302	7,786

(6) Changes in provisions for the year ended December 31, 2017 are as follows:

		2017					
		Provision for payment guarantees	Provision for unused commitments	Financial guarantee provision	Lawsuit provision	Other provision	Total
Beginning balance	₩	835,766	195,431	35,935	129,342	4,776	1,201,250
Increase (reversal) of provision		(117,793)	267,690	92,859	(1,053)	6,700	248,403
Provision used		-	-	-	(15,276)	(2,511)	(17,787)
Foreign exchange differences		(79,751)	(17,175)	6,527	-	-	(90,399)
Other		-	-	-	22,484	-	22,484
Ending balance	₩	638,222	445,946	135,321	135,497	8,965	1,363,951

(In millions of won)

26. Provisions, Continued

(7) 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.

(8) 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.

(9) Provision for possible losses from lawsuits
As of December 31, 2018, the Bank is involved in 25 lawsuits as a plaintiff and 35 lawsuits as a defendant. The aggregate amounts of claims as a plaintiff and a defendant amounted to ₩252,375 million and ₩228,604 million, respectively. The Bank provided a provision against contingent loss from pending lawsuits as of December 31, 2018 and additional losses may be incurred depending on the result of pending lawsuits.

Major lawsuits in progress as of December 31, 2018 and 2017 are as follows:

	December 31, 2018		
	Contents	Amounts	Status of lawsuit
Plaintiff:			
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩ 136,538	1st trial ruled against the Bank; 2nd trial in progress
Korea Credit Guarantee Fund	Claim for damages	60,100	1st trial ruled against the Bank; 2nd trial in progress
Gyeonggi Urban Innovation Corp.	Claim for refund of investments	19,100	1st, 2nd trial ruled partially in favor of the Bank; 3rd trial in progress
KAMCO 1th JV Securitization Specialty Co., Ltd.	Transfer of claim	8,792	1st trial in progress
Defendant:			
Shinhan Bank and one other	Claim for damages	58,474	1st trial in progress
Defense Acquisition Program Administration	Claim for guaranteed debt	56,977	1st trial ruled partially against the Bank; 2nd trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor	33,997	1st, trial ruled in favor of the Bank; 2nd trial in progress
Dongbu Corporation	Claim for objection of request (participation to support)	19,658	1st trial in progress
KAMCO 8th JV Securitization Specialty Co., Ltd.	Claim for refund of impairment sale payment	13,898	1st trial ruled partially against the Bank, 2nd trial in progress

(In millions of won)

26. Provisions, Continued

	December 31, 2017			
	Contents		Amounts	Status of lawsuit
Plaintiff:				
Korea Trade Insurance Corporation and one other	Claim for guarantee insurance	₩	136,538	1st trial in progress
Korea Credit Guarantee Fund	Claim for damages		60,100	1st trial ruled against the Bank; 2nd trial in progress
Korea Trade Insurance Corporation	Short-term export credit insurance		34,209	1st trial ruled against the Bank; 2nd trial in progress
Hyundai Engineering & Construction Co., Ltd. and two others	Claim for refund of special agreement settlement		27,180	1st trial ruled in favor of the Bank; 2nd trial in progress
Gyeonggi Urban Innovation Corp.	Claim for refund of investments		19,100	1st, 2nd trial ruled partially in favor of the Bank; 3rd trial in progress
Defendant:				
Hanhwa Chemical Co., Ltd.	Performance guarantee		322,593	Retrial in progress after quashing
Shinhan Bank and one other	Claim for damages		58,474	1st trial in progress
Defense Acquisition Program Administration	Claim for guaranteed debt		56,977	1st trial in progress
Dongbu Corporation	Claim for nullity of table of rehabilitation creditor		33,997	1st trial in progress
KAMCO 8th JV Securitization Specialty Co., Ltd.	Claim for refund of impairment sale payment		13,898	1st trial ruled partially against the Bank, 2nd trial in progress

(10) Other provision

The Bank recognised other provision as a reserve for other miscellaneous purpose.

27. Other Liabilities

Other liabilities as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Accounts payable	₩	1,857,585	4,580,635
Accrued expense		1,930,986	1,729,336
Unearned income		41,298	37,919
Deposits withholding tax		30,918	26,735
Guarantee money received		213,286	393,869
Foreign exchanges payable		10,969	77,289
Domestic exchanges payable		312,911	238,958
Borrowing from trust accounts		792,364	1,062,609
Financial guarantee liability		28,628	28,969
Others		46,263	325,444
		5,265,208	8,501,763
Present value discount		(351)	(266)
	₩	5,264,857	8,501,497

The carrying amount of financial liabilities included in other liabilities above amounted to ₩5,139,270 million and ₩8,133,810 million as of December 31, 2018 and 2017, respectively, and their fair value amounted to ₩5,139,289 million and ₩ 8,133,787 million as of December 31, 2018 and 2017, respectively.

(In millions of won)

28. Equity

(1) Issued capital

The Bank is authorized to issue up to 6,000 million shares of common stock and has 3,621,619,768 shares issued and 3,587,619,768 shares issued as of December 31, 2018 and 2017, respectively, and outstanding with a total par value of ₩18,108,099 million and ₩17,983,099 million as of December 31, 2018 and 2017, respectively.

(2) Capital surplus

Capital surplus as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Paid-in capital in excess of par value	₩	62,309	63,133
Surplus from capital reduction (*1)		44,373	44,373
Other capital surplus (*2)		2,390,495	2,390,495
	₩	2,497,177	2,498,001

(*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.

(3) Accumulated other comprehensive income

(i) Accumulated other comprehensive income as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Net gain (loss) on securities measured at FVOCI:			
Valuation gain (loss) on securities measured at FVOCI (before tax)	₩	(93,687)	-
Loss allowance for securities measured at FVOCI (before tax)		76,494	-
Income tax effect		4,728	-
		(12,465)	-
Valuation gain on available-for-sale financial assets:			
Valuation gain on available-for-sale financial assets (before tax)		-	683,258
Income tax effect		-	(187,896)
		-	495,362
Exchange differences on translation of foreign operations:			
Exchange differences on translation of foreign operations (before tax)		(33,017)	(69,467)
Income tax effect		-	-
		(33,017)	(69,467)
Valuation loss on cash flow hedge:			
Valuation loss on cash flow hedge (before tax)		(2,579)	(6,910)
Income tax effect		709	1,900
		(1,870)	(5,010)

(In millions of won)

28. Equity, Continued

		December 31, 2018	December 31, 2017
Remeasurements of defined benefit liabilities:			
Remeasurements of defined benefit liabilities (before tax)	₩	15,828	21,881
Income tax effect		(4,352)	(6,017)
		11,476	15,864
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)		4,384	-
Income tax effect		(1,206)	-
		3,178	-
	₩	(32,698)	436,749

(ii) Changes in accumulated other comprehensive income for the years ended December 31, 2018 and 2017 are as follows:

		2018			
		January 1, 2018	Increase (Decrease)	Tax Effect	December 31, 2018
Gain on Securities Measured at FVOCI	₩	161,165	(239,495)	65,865	(12,465)
Exchange differences on translation of foreign operations		(69,420)	36,403	-	(33,017)
Valuation loss on cash flow hedge		(5,009)	4,330	(1,191)	(1,870)
Remeasurements of defined benefit liabilities		15,864	(6,053)	1,665	11,476
Valuation gain on financial liabilities designated at fair value due to credit risk		9,520	(8,747)	2,405	3,178
	₩	112,120	(213,562)	68,744	(32,698)

		2017			
		January 1, 2017	Increase (Decrease)	Tax Effect	December 31, 2017
Valuation gain on available-for-sale financial assets	₩	1,185,168	(880,288)	190,482	495,362
Exchange differences on translation of foreign operations		22,169	(91,636)	-	(69,467)
Valuation loss on cash flow hedge		(13,000)	10,240	(2,250)	(5,010)
Remeasurements of defined benefit liabilities		19,128	(3,354)	90	15,864
	₩	1,213,465	(965,038)	188,322	436,749

(In millions of won)

28. 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, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Legal reserve	₩	173,913	-
Voluntary reserve			
Regulatory reserve for loan losses		1,372,030	1,308,500
Unappropriated retained earnings		2,866,706	434,782
	₩	4,412,649	1,743,282

(ii) Changes in legal reserve for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	-	3,578,770
Transfer from retained earnings		173,913	-
Coverage of deficits		-	(3,578,770)
Ending balance	₩	173,913	-

(iii) Changes in unappropriated retained earnings (accumulated deficits) for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	434,782	(3,641,098)
Changes in accounting policy		290,907	-
Transfer from (contribution to) legal reserve		(173,913)	3,578,770
Transfer from (contribution to) regulatory reserve for credit losses		(63,530)	62,328
Dividends		(147,092)	-
Reclassification of gain or loss on equity securities measured at FVOCI		15,707	-
Profit for the year		2,509,845	434,782
Ending balance	₩	2,866,706	434,782

(In millions of won)

28. Equity, Continued

(iv) Statements of appropriation of retained earnings for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
I. Unappropriated retained earnings:			
Unappropriated retained earning carried forward from the prior year	₩	50,247	-
Changes in accounting policy		290,907	-
Gain on disposal of securities measured at FVOCI		15,707	-
Profit for the year		2,509,845	434,782
		2,866,706	434,782
II. Appropriation of retained earnings:			
Contribution to legal reserve		1,003,938	173,913
Contribution to (Transfer from) regulatory reserve for credit losses		(144,330)	63,530
Dividends (₩40 per share)		144,865	147,092
		1,004,473	384,535
III. Unappropriated retained earnings to be carried over to subsequent year	₩	1,862,233	50,247

(In millions of won)

28. 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, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Beginning balance	₩	1,372,030	1,308,500
Planned provision for (reversal of) reserve for credit losses			
Changes in accounting policy		(8,262)	-
Planned provision for (reversal of) reserve for credit losses		(136,068)	63,530
		(144,330)	63,530
Ending balance	₩	1,227,700	1,372,030

(ii) Required reversal of regulatory reserve for credit losses and profit after adjusting regulatory reserve for loan losses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Profit for the year	₩	2,509,845	434,782
Obligated amount of reversal of (provision for) regulatory reserve for credit losses		136,068	(63,530)
Profit after adjusting regulatory reserve for credit losses	₩	2,645,913	371,252
Earnings per share after adjusting regulatory reserve for credit losses (in won)	₩	734	105

(In millions of won)

29. Net Interest Income

Net interest income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Interest income:			
Due from banks	₩	93,883	49,480
Securities measured at FVTPL		51,702	-
Financial assets held for trading		-	46,363
Securities measured at FVOCI		390,754	-
Available-for-sale financial assets		-	407,669
Loans measured at amortized cost		21,569	-
Held-to-maturity financial assets		-	316
Loans measured at FVTPL		37,497	-
Loans measured at amortized cost		4,550,447	-
Loans		-	4,369,445
		5,145,852	4,873,273
Interest expense:			
Financial liabilities measured at FVTPL		(79,695)	(68,190)
Deposits		(517,250)	(484,254)
Borrowings		(426,776)	(295,026)
Debentures		(2,739,345)	(2,539,432)
		(3,763,066)	(3,386,902)
	₩	1,382,786	1,486,371

Interest received from impaired assets relating to loans measured at amortized cost and loans for the years ended December 31, 2018 and 2017 were ₩49,878 million and ₩156,909 million, respectively, and there was no interest received from impaired assets related to financial assets other than loans.

30. Net Fees and Commission Income

Net fees and commission income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Fees and commission income:			
Loan commissions	₩	144,321	171,199
Underwriting and investment consulting commissions		116,611	152,045
Brokerage and agency commissions		6,542	7,097
Trust and retirement pension plan commissions		30,553	23,585
Fees on asset management		2,870	1,835
Other fees		65,974	78,928
		366,871	434,689
Fees and commission expenses:			
Brokerage and agency fees		(10,822)	(11,561)
Other fees		(18,660)	(19,550)
		(29,482)	(31,111)
	₩	337,389	403,578

(In millions of won)

31. Dividend Income

Dividend income for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Securities measured at FVTPL	₩	140,858	-
Financial assets held for trading		-	178
Securities measured at FVOCI		127,468	-
Available-for-sale financial assets		-	219,383
Investments in subsidiaries and associates		462,108	631,250
	₩	730,434	850,811

32. Net Loss on Securities Measured at FVTPL

Net loss related to securities measured at FVTPL for the year ended December 31, 2018 are as follows:

		2018
Gains on securities measured at FVTPL:		
Gains on sale	₩	82,711
Gains on valuation		196,582
		279,293
Losses on securities measured at FVTPL:		
Losses on sale		(56,324)
Losses on valuation		(228,721)
Purchase related expense		(120)
		(285,165)
	₩	(5,872)

33. Net Loss on Financial Assets Held for Trading

Net loss related to financial assets held for trading for the year ended December 31, 2017 are as follows:

		2017
Gains on financial assets held for trading:		
Gains on sale	₩	14,661
Gains on valuation		1,355
		16,016
Losses on financial assets held for trading:		
Losses on sale		(35,269)
Losses on valuation		(2,617)
Purchase related expense		(247)
		(38,133)
	₩	(22,117)

(In millions of won)

34. Net Gain (Loss) on Financial Liabilities Measured at FVTPL

Net gain (loss) related to financial liabilities designated at fair value through profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Gains on financial liabilities measured at FVTPL:			
Gains on redemption	₩	-	2,714
Gains on valuation		12,260	77,819
		12,260	80,533
Losses on financial liabilities measured at FVTPL:			
Losses on redemption		-	(32)
Losses on valuation		(56,027)	(141)
		(56,027)	(173)
	₩	(43,767)	80,360

35. Net Gain on Securities Measured at FVOCI

Net gain related to securities measured at FVOCI for the year ended December 31, 2018 are as follows:

		2018
Gains on securities measured at FVTPL:		
Gains on sale	₩	31,432
Reversal of impairment losses		8,923
		40,355
Losses on securities measured at FVTPL:		
Losses on sale		(26,052)
Impairment losses		(2,277)
		(28,329)
	₩	12,026

36. Net Gain on Available-for-Sale Financial Assets

Net gain on available-for-sale financial assets for the year ended December 31, 2017 and are as follows:

		2017
Gains on available-for-sale financial assets:		
Gains on sale	₩	1,113,122
Reversal of impairment losses		2,177
		1,115,299
Losses on available-for-sale financial assets:		
Losses on sale		(43,345)
Impairment losses		(186,928)
		(230,273)
	₩	885,026

(In millions of won)

37. Net Gain on Derivatives

Net gain on derivatives for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Net gain (loss) on trading purpose derivatives:			
Gains on trading purpose derivatives:			
Interest	₩	2,223,623	2,148,591
Currency		6,729,067	11,223,678
Stock		176,965	24,266
Commodity		743	6,774
Embedded derivatives		638	45,331
Gains on adjustment of derivatives		2,001	46,095
		9,133,037	13,494,735
Losses on trading purpose derivatives:			
Interest		(2,089,177)	(2,148,288)
Currency		(6,485,150)	(11,496,872)
Stock		(36,357)	(20,706)
Commodity		(743)	(6,774)
Embedded derivatives		-	(43,786)
Losses on adjustment of derivatives		(12,522)	(11,055)
		(8,623,949)	(13,727,481)
		509,088	(232,746)
Net gain (loss) on hedging purpose derivatives:			
Gains on hedging purpose derivatives:			
Interest		212,958	17,690
Currency		272,044	691,998
Gains on adjustment of derivatives		140	5,671
		485,142	715,359
Losses on hedging purpose derivatives:			
Interest		(139,828)	(281,367)
Currency		(640,231)	(208,363)
Losses on adjustment of derivatives		(505)	(181)
		(780,564)	(489,911)
		(295,422)	225,448
Net gain (loss) on fair value hedged items:			
Gains on fair value hedged items:			
Gains on valuation		286,811	618,061
Gains on redemption		301,620	171,505
		588,431	789,566
Losses on fair value hedged items:			
Losses on valuation		(290,118)	(21,741)
Losses on redemption		(334,375)	(140,965)
		(624,493)	(162,706)
		(36,062)	626,860
	W	177,604	619,562

Related with cash flow hedge, the Bank recognized ₩109 million of gain and ₩172 million of loss in the statement of comprehensive income as the ineffective portion for the years ended December 31, 2018 and 2017, respectively.

(In millions of won)

38. Net Foreign Currency Transaction Gain (Loss)

Net foreign currency transaction gain (loss) for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Net gain on foreign exchange transactions:			
Gains on foreign exchange transactions	₩	503,558	665,194
Losses on foreign exchange transactions		(491,129)	(654,956)
		12,429	10,238
Net gain (loss) on foreign exchange translations:			
Gains on foreign exchange translations		1,525,047	3,309,624
Losses on foreign exchange translations		(1,410,192)	(3,641,639)
		114,855	(332,015)
	₩	127,284	(321,777)

(In millions of won)

39. Other Operating Expense, net

Other operating income and expense for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Other operating income:			
Gains on sale of loans	₩	44,406	174,537
Gains on disposal of loans measured at FVTPL		17,507	-
Gains on valuation of loans measured at FVTPL		80,597	-
Gains on disposal of investments in subsidiaries and associates		273,110	3,492
Reversal of provisions		11	1,053
Others		13,653	5,374
		429,284	184,456
Other operating expenses:			
Losses on sale of loans		(147,995)	(259,990)
Losses on disposal of loans measured at FVTPL		(29,456)	-
Losses on valuation of loans measured at FVTPL		(48,140)	-
Losses on disposal of investments in subsidiaries and associates		(16,471)	(13,004)
Provision for other losses		-	(6,700)
Insurance expenses		(46,533)	(50,616)
Credit guarantee fund salary		(139,914)	(139,219)
Educational taxes		(31,085)	(33,534)
Foreign security contributions		(6,095)	(8,269)
Others		(22,188)	(28,455)
		(487,877)	(539,787)
	₩	(58,593)	(355,331)

(In millions of won)

40. Provision for Credit Losses

Provision for credit losses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Provision for loan loss allowance	₩	377,405	1,212,184
Provision for other assets		22,686	35,497
Provision for (reversal of) unused commitments		(10,438)	267,690
Provision for (reversal of) of financial guarantee provision		(38,833)	92,859
Provision for (reversal of) payment guarantees		121,728	(117,793)
	₩	472,548	1,490,437

41. General and Administrative Expenses

General and administrative expenses for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Payroll costs:			
Short-term employee benefits	₩	349,299	346,679
Defined benefit costs		40,515	38,745
Defined contribution costs		4,609	3,510
		394,423	388,934
Depreciation and amortization:			
Depreciation of property and equipment		32,939	29,318
Amortization of intangible assets		17,999	20,674
		50,938	49,992
Other:			
Employee welfare benefits		29,390	28,922
Rent expenses		29,276	28,896
Taxes and dues		25,436	25,430
Advertising expenses		17,344	17,092
Electronic data processing expenses		58,567	58,757
Fees and charges		23,848	23,335
Others		46,462	39,938
		230,323	222,370
	₩	675,684	661,296

(In millions of won)

42. Other Non-Operating Income and Expense

Other non-operating income and expense for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Other non-operating income:			
Gain on disposal of non-current assets held for sale	₩	54,943	9,297
Gain on disposal of property and equipment		88	536
Rental income on investment property		1,443	1,418
Others		4,352	6,787
		60,826	18,038
Other non-operating expense:			
Losses on disposal of non-current assets held for sale		(2,599)	(102)
Losses on disposal of property and equipment		(814)	(51)
Losses on disposal of intangible assets		-	(16)
Depreciation of investment property		(2,011)	(2,019)
Donations		(12,147)	(6,238)
Others		(4,361)	(27,860)
		(21,932)	(36,286)
	₩	38,894	(18,248)

(In millions of won)

43. Income Tax Expense

(1) Income tax expense for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Current income tax (*)	₩	203,599	377,992
Changes in deferred income taxes on temporary differences		114,674	(318,504)
Deferred income tax recognized directly to equity			
Other comprehensive income		68,744	188,322
Retained earnings		(5,958)	-
Income tax expense	₩	381,059	247,810

(*) 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, 2018 and 2017 are as follows:

		2018	2017
Profit before income taxes	₩	2,890,904	682,592
Income taxes calculated using enacted tax rates		794,999	164,725
Adjustments:			
Non-deductible losses and tax-free gains		(19,682)	(48,035)
Non-recognition effect of deferred income taxes		(434,076)	75,123
Net adjustments for prior years		26,319	(25,699)
Others		13,499	81,696
		(413,940)	83,085
Income tax expense	₩	381,059	247,810
Effective tax rate (%)		13.18	36.30

(In millions of won)

43. Income Tax Expense, Continued

(3) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2018 and 2017 are as follows:

		2018				
		January 1, 2018 (*)	Decrease	Increase	December 31, 2018	Deferred tax assets (liabilities)
Derivatives	₩	24,078	24,241	(331,160)	(331,323)	(91,114)
Investments in subsidiaries and associates		(6,292,226)	36,673	(1,340,951)	(7,669,850)	(2,367,842)
Gains on fair value hedged items valuation		(791,376)	(791,376)	(429,827)	(429,827)	(118,202)
Losses on foreign exchange translation for hedged liabilities		515,299	515,299	264,036	264,036	72,610
Impairment losses on debt securities		64,768	(1,165)	-	65,933	18,132
Impairment losses on equity securities		113,846	65,233	13,285	61,898	17,022
Defined benefit obligation		313,403	17,315	50,816	346,904	95,399
Plan assets		(298,240)	(17,315)	(22,928)	(303,853)	(83,560)
Financial assets held for trading		(67,245)	(6,433)	121,743	60,931	16,756
Available-for-sale financial assets		(158,946)	(1,712)	-	(157,234)	(2,804)
Write-off		3,805,312	931,033	105,086	2,979,365	575,484
Provisions		753,208	1,259,909	1,290,700	783,999	215,600
Property impairment losses		6,976	173	-	6,803	1,871
Loan origination fees		(6,527)	(6,527)	(15,814)	(15,814)	(4,349)
Gains on sales of loans		(31,409)	15,356	(6,046)	(52,811)	(14,523)
Others		2,391,156	1,201,492	1,202,193	2,391,857	581,349
		342,077	3,242,196	901,133	(1,998,986)	(1,088,171)
Temporary differences from unrecognized deferred tax assets and liabilities:						
Investments in subsidiaries and associates		3,572,906	1,614,909	-	1,957,997	-
	₩	3,914,983	4,857,105	901,133	(40,989)	(1,088,171)

(*) Temporary differences as of January 1, 2018 reflected previous year's additional tax adjustment after the financial statements were issued.

(In millions of won)

43. Income Tax Expense, Continued

		2017				
		January 1, 2017 (*)	Decrease	Increase	December 31, 2017	Deferred tax assets (liabilities)
Derivatives	₩	232,582	232,582	(113,946)	(113,946)	(31,335)
Investments in subsidiaries and associates		(7,080,102)	(13,893)	773,983	(6,292,226)	(2,440,218)
Gains on fair value hedged items valuation		(451,203)	(451,203)	(791,376)	(791,376)	(217,628)
Losses on foreign exchange translation for hedged liabilities		407,027	407,027	515,299	515,299	141,707
Impairment losses on debt securities		284,895	33,072	-	251,823	69,251
Impairment losses on equity securities		661,040	176,835	88,213	572,418	153,508
Defined benefit obligation		278,329	10,792	45,866	313,403	86,186
Plan assets		(264,474)	(10,792)	(44,558)	(298,240)	(82,016)
Financial assets held for trading		(81,178)	(20,364)	(6,432)	(67,246)	(18,493)
Available-for-sale financial assets		(160,554)	(1,608)	-	(158,946)	(3,275)
Write-off		3,383,852	2,358	423,745	3,805,239	820,691
Provisions		732,474	1,239,175	1,235,235	728,534	200,347
Property impairment losses		7,149	173	-	6,976	1,918
Loan origination fees		(4,770)	(4,770)	(6,661)	(6,661)	(1,832)
Gains on sales of loans		(39,861)	(14,917)	(6,466)	(31,410)	(8,638)
Others		22,104	(493,907)	1,080,491	1,596,502	356,329
		(2,072,690)	1,090,560	3,193,393	30,143	(973,497)
Temporary differences from unrecognized deferred tax assets and liabilities:						
Investments in subsidiaries and associates		3,419,215	-	153,691	3,572,906	-
	₩	1,346,525	1,090,560	3,347,084	3,603,049	(973,497)

(*) Temporary differences as of January 1, 2017 reflected previous year's additional tax adjustment after the financial statements were issued.

(In millions of won)

43. Income Tax Expense, Continued

(4) Changes in income tax expense recognized directly to equity for the years ended December 31, 2018 and 2017 are as follows:

		2018				
		December 31, 2018		January 1, 2018		
		Amounts before tax	Tax effect	Amounts before tax	Tax effect	Changes in tax effect
Net gain (loss) on securities measured at FVOCI	₩	(12,465)	4,728	161,165	(61,137)	65,865
Exchange differences on translation of foreign operations		(33,017)	-	(69,420)	-	-
Losses on valuation of cash flow hedge		(1,870)	709	(5,009)	1,900	(1,191)
Remeasurements of defined benefit liabilities		11,476	(4,352)	15,864	(6,017)	1,665
Fair value changes on financial liabilities designated at fair value due to credit risk		3,178	(1,206)	9,520	(3,611)	2,405
	₩	(32,698)	(121)	112,120	(68,865)	68,744

Income tax benefit recognized direct to retained earnings amounting to ₩5,958 million is the tax effect of realized income amounting to ₩21,665 million from disposal of equity securities measured at FVOCI.

		2017				
		December 31, 2017		January 1, 2017		
		Amounts before tax	Tax effect	Amounts before tax	Tax effect	Changes in tax effect
Gains on valuation of available-for-sale financial assets	₩	495,362	(187,896)	1,185,168	(378,378)	190,482
Exchange differences on translation of foreign operations		(69,467)	-	22,169	-	-
Losses on valuation of cash flow hedge		(5,010)	1,900	(13,000)	4,150	(2,250)
Remeasurements of defined benefit liabilities		15,864	(6,017)	19,128	(6,107)	90
	₩	436,749	(192,013)	1,213,465	(380,335)	188,322

44. Earnings per Share

(1) Basic earnings per share
The Bank's basic earnings per share for the years ended December 31, 2018 and 2017 are computed as follows:

(i) Basic earnings per share

		2018	2017
Profit attributable to ordinary shareholders of the Bank (A) (in won)	₩	2,509,845,232,262	434,781,932,134
Weighted-average number of ordinary shares outstanding (B)		3,605,597,850	3,543,630,727
Basic earnings per share (A/B) (in won)	₩	696	123

(ii) Weighted-average number of ordinary shares outstanding

2018	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	3,587,619,768	365	1,309,481,215,320
Increased paid-in capital (B)	34,000,000	193	6,562,000,000
Cumulative shares (C = A+B)			1,316,043,215,320
Weighted-average number of ordinary shares outstanding (C/365)			3,605,597,850

2017	Number of ordinary shares	Days	Cumulative shares
Number of ordinary shares outstanding at the beginning of the year (A)	3,508,619,768	365	1,280,646,215,320
Increased paid-in capital (B)	50,000,000	222	11,100,000,000
Increased paid-in capital (C)	16,000,000	96	1,536,000,000
Increased paid-in capital (D)	13,000,000	11	143,000,000
Cumulative shares (E=A+B+C+D)			1,293,425,215,320
Weighted average number of ordinary shares outstanding (E/365)			3,543,630,727

(2) Diluted earnings per share
Diluted and basic earnings per share for the years ended December 31, 2018 and 2017 are equal because there is no potential dilutive instrument.

(In millions of won)

45. Pledged Assets

Assets pledged by the Bank as collateral as of December 31, 2018 and 2017 are as follows:

		December 31, 2018		December 31, 2017	
		Pledged assets	Related liabilities	Pledged assets	Related liabilities
Securities measured at FVOCI (*)	₩	6,012,532	2,211,955	-	-
Securities measured at amortized cost (*)		1,093,314	113,825	-	-
Available-for-sale financial assets (*)		-	-	8,472,566	4,339,565
	₩	7,105,846	2,325,780	8,472,566	4,339,565

(*) Pledged as collateral related to bonds sold under repurchase agreements and borrowings.

46. Guarantees and Commitments

Guarantees and commitments as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Confirmed acceptances and guarantees:			
Acceptances in foreign currency	₩	631,298	399,219
Guarantees for bond issuance		2,069,094	1,817,983
Guarantees for loans		408,907	664,148
Letter of guarantee		54,522	37,105
Guarantees for on-lending debt		17,910	28,272
Others		4,666,096	4,856,801
		7,847,827	7,803,528
Unconfirmed acceptances and guarantees:			
Letter of credit		1,890,514	2,080,609
Others		1,584,031	1,397,251
		3,474,545	3,477,860
Commitments:			
Commitments on loans		27,777,491	4,176,745
Others		2,175,793	2,180,792
		29,953,284	6,357,537
Bills endorsed:			
With recourse		7,469	3,028
	₩	41,283,125	17,641,953

(In millions of won)

47. Trust Accounts

(1) Trust accounts as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Accrued trust fee	₩	9,452	25,581
Deposits		9,082	13,625
Borrowings from trust accounts		741,805	1,008,213
Accrued interest on deposits		1,190	1,383

(2) Transactions with trust accounts for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Trust management fee	₩	28,404	21,458
Interest expenses on deposits		300	984
Interest expenses of borrowings from trust accounts		15,952	14,026

(3) The carrying amounts of principals guaranteed money trust and principals and interest guaranteed money trust as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Principals guaranteed money trust	₩	268,373	272,499
Principals and interest guaranteed money trust		243,873	252,811
	₩	512,246	525,310
Principle of money and property trust	₩	462,156	462,999
Income from trust deposits payable		36,180	34,724
Other liabilities and special reserve		13,910	27,587

(In millions of won)

48. Related Party Transactions

(1) The Bank's related parties as of December 31, 2018 are as follows:

Classification	Corporate name
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, Korea Infrastructure Financing Co. and 6 others, KDB Value PEF VI, KDB Value PEF VII, KDB Venture M&A PEF, KDB Consus Value PEF, Components and Materials M&A PEF and 6 others, KDBC IP Investment Fund 2, KoFC-KDBC Pioneer Champ 2010-4 venture investment fund, Principals guaranteed trust accounts of KDB, Principals and interests guaranteed interest trust accounts of KDB, Ubest 4th Securitization Specialty Co., Ltd. and 7 others, KIAMCO Road Investment Private Fund Special Asset Trust 2 and 32 others
Associates	Korea Electric Power Co., Ltd., Korea Tourism Organization, Korea Ocean Business Corporation, Korea Appraisal Board, GM Korea Company, Hyundai Merchant Marine Co., Ltd., Dongbu Steel Co., Ltd. and 74 others, Troika Resources Investment PEF and 96 others, KoFC-KVIC Job Creation Fund II and 106 others
Others	Key management personnel

(2) Significant balances with related parties as of December 31, 2018 and 2017 are as follows:

	Account		December 31, 2018	December 31, 2017
Subsidiaries:				
KDB Capital Corporation	Loans	₩	5,878	108,030
	Allowance for loan losses		(1)	(30)
	Derivative financial assets		1,044	1,183
	Other assets		8	49
	Deposits		57	71
	Derivative financial liabilities		1,924	3,689
	Other liabilities		511	529
KDB Infrastructure Investment Asset Management Co., Ltd.	Deposits		34,639	28,344
	Borrowings		-	1
	Other liabilities		1	-
KDB Ireland Ltd.	Loans		368,099	314,908
	Allowance for loan losses		(37)	(112)
	Derivative financial assets		1,688	1,868
	Other assets		714	446
	Borrowings		1,677	-
	Derivative financial liabilities		1,789	1,094
KDB Bank Europe Ltd.	Cash and due from banks		373,965	430,567
	Loans		23,979	10,714
	Allowance for loan losses		(6)	(12)
	Derivative financial assets		1,611	1,583
	Other assets		566	528
	Derivative financial liabilities		259	21
Banco KDB Do Brazil S.A.	Cash and due from banks		72,677	107,140
	Loans		111,810	107,140
	Allowance for loan losses		(29)	(120)
	Other assets		82	148
	Allowance of other assets		(1)	(1)

(In millions of won)

48. Related Party Transactions, Continued

	Account		December 31, 2018	December 31, 2017
KDB Asia Ltd.	Cash and due from banks	₩	268,344	192,852
	Loans		234,801	54,641
	Allowance for loan losses		(18)	(6)
	Derivative financial assets		15	287
	Other assets		820	310
	Deposits		2	2
	Derivative financial liabilities		547	47
KDB Value PEF VI	Loans		1,261,496	1,291,074
	Allowance for loan losses		(2,305)	(3,628)
	Derivative financial assets		520	15,573
	Other assets		22,026	48,748
	Allowance of other assets		(27)	(51)
	Deposits		64,196	64,725
	Borrowings		4,521	5,762
	Derivative financial liabilities		2,000	1,597
	Other liabilities		111	26,998
	Other provisions		399	331
KDB Consus Value PEF	Securities		129,812	70,155
	Derivative financial assets		1,979	-
	Other assets		483	810
	Deposits		9	36
	Derivative financial liabilities		3,513	60,617
	Other liabilities		1,160	1,552
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Loans		1,499,157	1,766,654
	Allowance for loan losses		(359,448)	(591,476)
	Derivative financial assets		38,978	9,296
	Other assets		3,100	2,974
	Deposits		660,082	644,998
	Derivative financial liabilities		15,044	134,612
	Other liabilities		3,544	2,947
	Other provisions		584,663	598,086
Others	Loans		1,191,767	775,025
	Allowance for loan losses		(572,487)	(153,892)
	Derivative financial assets		3,472	4,349
	Other assets		18,310	8,328
	Allowance of other assets		(10,629)	(343)
	Deposits		37,457	21,083
	Borrowings		38,943	-
	Derivative financial liabilities		1,983	-
	Other liabilities		418	578
	Other provisions		80,771	3,524

(In millions of won)

48. Related Party Transactions, Continued

	Account		December 31, 2018	December 31, 2017
Associates:				
Korea Electric Power Co., Ltd.	Securities	₩	29,484	59,643
	Loans		151,947	134,792
	Allowances for loan losses		(2,769)	(27)
	Derivative financial assets		37,760	39,790
	Other assets		65	122
	Deposits		36,148	497,312
	Borrowings		4,355	15,129
	Derivative financial liabilities		36,277	290
	Other liabilities		-	282
	Other provisions		14	8
Dongbu Steel Co., Ltd.	Loans		978,743	1,046,630
	Allowances for loan losses		(454,726)	(229,291)
	Deposits		10,391	43,035
	Other liabilities		261	62
	Other provisions		47,451	12,183
Hyundai Merchant Marine Co., Ltd.	Securities		363,615	-
	Loans		500,156	584,021
	Allowances for loan losses		(35,423)	(175,062)
	Deposits		561,979	200,000
	Other liabilities		-	144
Others	Securities		6,139	186
	Loans		1,049,129	1,185,523
	Allowances for loan losses		(769,269)	(746,685)
	Other assets		152,478	150,011
	Deposits		704,376	721,013
	Other liabilities		-	2,222
	Other provisions		121,468	123,661

(3) Significant profit or loss with related parties for the years ended December 31, 2018 and 2017 are as follows:

	Account		2018	2017
Subsidiaries:				
KDB Capital Corporation	Interest income	₩	834	1,299
	Dividend income		44,109	35,225
	Fees and commission income, other income		5,502	4,456
	Provision for loan losses		-	(109)
	Other operating expenses		(2,261)	(12,445)
KDB Infrastructure Investments Asset Management Co., Ltd.	Dividend income		9,258	6,716
	Fees and commission income, other income		55	50
	Interest expenses		(440)	(17)

(In millions of won)

48. Related Party Transactions, Continued

	Account		2018	2017
KDB Ireland Ltd.	Interest income	₩	5,337	4,079
	Reversal of allowance for loan losses		-	23
	Fees and commission income, other income		1,835	114
	Provision for loan losses		(5)	(31)
	Other operating expenses		(1,258)	(1,276)
KDB Bank Europe Ltd.	Interest income		8,025	6,177
	Fees and commission income, other income		1,574	2,874
	Provision for loan losses		(1)	-
	Other operating expenses		(786)	(68)
Banco KDB Do Brazil S.A.	Interest income		4,040	2,880
	Reversal of allowance for loan losses		-	123
	Provision for loan losses		(11)	(61)
	Other operating expenses		(58)	(14)
KDB Asia Ltd.	Interest income		6,579	3,963
	Reversal of allowance for loan losses		-	61
	Fees and commission income, other income		746	1,487
	Provision for loan losses		(8)	(56)
	Other operating expenses		(2,774)	(1,646)
KDB Value PEF VI	Interest income		49,717	50,907
	Fees and commission income, other income		3,469	51,669
	Interest expenses		(317)	(463)
	Other operating expenses		(9,214)	(23,700)
KDB Consus Value PEF	Interest income		3,636	3,315
	Fees and commission income, other income		66,091	13,769
	Other operating expenses		(4,423)	(198,367)
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Interest income		35,048	67,860
	Reversal of allowance for loan losses		233,754	-
	Fees and commission income, other income		165,111	17,323
	Interest expenses		(7,588)	(5,124)
	Provision for loan losses		-	(25,489)
	Other operating expenses		9,073	(523,125)

(In millions of won)

48. Related Party Transactions, Continued

	Account		2018	2017
Others	Interest income	₩	59,111	27,877
	Dividend income		33,061	78,966
	Reversal of allowance for loan losses		-	21,512
	Fees and commission income, other income		22,989	29,750
	Interest expenses		(503)	(96)
	Provision for loan losses		(402,315)	(310,776)
	Other operating expenses		(89,022)	(33,108)
Associates:				
Korea Electric Power Co., Ltd.	Interest income		4,860	4,476
	Dividend income		166,876	418,246
	Reversal of allowance for loan losses		-	14
	Fees and commission income, other income		13,179	56,944
	Interest expenses		(4,984)	(2,002)
	Provision for loan losses		(2,738)	-
	Other operating expenses		(54,992)	(6,672)
Others	Interest income		78,582	213,068
	Dividend income		171,696	102,545
	Fees and commission income, other income		50,167	48,895
	Interest expenses		(10,691)	(8,244)
	Provision for loan losses		(227,827)	(72,839)
	Other operating expenses		(74,595)	133,221
		₩	357,503	184,156

(In millions of won)

48. Related Party Transactions, Continued

(4) Details of guarantees and commitments to the related parties as of December 31, 2018 and 2017 are as follows:

	Account		December 31, 2018	December 31, 2017
Subsidiaries:				
KDB Value VI PEF	Confirmed acceptances and guarantees	₩	120,333	125,154
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	Confirmed acceptances and guarantees		2,112,081	2,098,718
	Unconfirmed acceptances and guarantees		602,205	799,035
Others	Confirmed acceptances and guarantees		251,401	-
	Loan commitments		206,100	315,500
Associates:				
Dongbu Steel Co., Ltd.	Confirmed acceptances and guarantees		178,752	140,759
	Unconfirmed acceptances and guarantees		32,411	24,696
Others	Confirmed acceptances and guarantees		128,836	176,062
	Unconfirmed acceptances and guarantees		124,797	90,741
	Loan commitments		18,591	8,243
		₩	3,775,507	3,778,908

(5) Details of compensation to key management personnel for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Short-term employee benefits	₩	1,072	1,030
Post-employment benefits		2	40
	₩	1,074	1,070

(6) No asset pledged as collaterals to the related parties and from the related parties as of December 31, 2018 exists and details of assets pledged as collaterals from the related parties as of December 31, 2017 are as follows:

		December 31, 2017		
		Carrying amounts	Amounts collateralized	Security provider
Securities denominated in foreign currencies	₩	51,709	50,570	KDB Ireland Ltd.

(In millions of won)

49. Statements of Cash Flows

(1) Cash and cash equivalents in the statements of cash flows as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Cash and due from banks:			
Cash and foreign currencies	₩	59,835	62,862
Due from banks in Korean won		3,502,528	3,637,424
Due from banks in foreign currencies / off-shores		3,612,866	2,908,356
		7,175,229	6,608,642
Less: Restricted due from banks, others		(4,591,570)	(3,305,131)
Add: Financial instruments reaching maturity within three months from date of acquisition			
Government and public bonds		218,981	444,643
Call-loans		3,137,889	4,126,167
Inter-bank loans		908,806	711,892
		4,265,676	5,282,702
	₩	6,849,335	8,586,213

(2) Significant transactions not involving cash flows for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Decrease in loans due to write-offs	₩	235,303	116,883
Increase in securities measured at FVOCI due to debt-to-equity swap, etc		57,287	-
Increase in available-for-sale financial assets due to debt-to-equity swap		-	79,143
Increase of available-for-sale financial assets due to the contribution from the government		-	250,000
Decrease in accumulated other comprehensive income due to securities valuation		(239,495)	(880,288)
Deferred income tax effect due to securities valuation		65,865	190,482
Reclassification of available-for-sale financial assets to investments in subsidiaries and associates		-	15
Reclassification of investments in subsidiaries and associates to available-for-sale financial assets		-	6,638
Reclassification of investments in subsidiaries and associates to assets held for sale		-	58,473
Reclassification of investments in subsidiaries and associates to securities measured at FVOCI		2,050	-
Reclassification of investments in subsidiaries and associates to securities measured at FVTPL		1,700	-
Transfer from investment property to property and equipment		7,169	1,807

(In millions of won)

50. 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, 2018 and 2017 are as follows:

Characteristics of transactions		December 31, 2018 Carrying amounts for transferred assets	December 31, 2018 Carrying amounts for related liabilities	December 31, 2017 Carrying amounts for transferred assets	December 31, 2017 Carrying amounts for related liabilities
Repurchase agreements	₩	4,702,089	2,211,955	4,612,255	3,516,978
Loaned securities		60,409	-	-	-
	₩	4,762,498	2,211,955	4,612,255	3,516,978

51. 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, 2018 and 2017 are as follows:

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Securities measured at FVTPL	₩	631,983	2,840,076	5,037,128	8,509,187
Securities measured at FVOCI		1,006,091	11,607,635	10,191,950	22,805,676
Loans measured at FVTPL		-	-	778,884	778,884
Derivative financial assets		275	3,736,256	139,377	3,875,908
	₩	1,638,349	18,183,967	16,147,339	35,969,655
Financial liabilities:					
Financial liabilities designated at FVTPL	₩	-	2,164,538	-	2,164,538
Derivative financial liabilities		364	3,232,198	66	3,232,628
	₩	364	5,396,736	66	5,397,166

		December 31, 2017			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Financial assets held for trading	₩	545,597	381,140	-	926,737
Available-for-sale financial assets		2,172,210	15,813,842	14,076,869	32,062,921
Derivative financial assets		372	6,110,887	138,350	6,249,609
	₩	2,718,179	22,305,869	14,215,219	39,239,267
Financial liabilities:					
Financial liabilities designated at FVTPL	₩	-	1,583,713	-	1,583,713
Derivative financial liabilities		1,497	5,902,375	3,931	5,907,803
	₩	1,497	7,486,088	3,931	7,491,516

(In millions of won)

51. 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, 2018 and 2017 are as follows:

	2018					
	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, 2018	₩ 3,956,264	9,859,935	1,132,688	-	14,948,887	3,931
Profit or loss	(27,395)	-	32,458	139,258	144,321	(3,865)
Other comprehensive income	-	(183,337)	-	-	(183,337)	-
Acquisition / Issue	1,365,564	569,102	31,078	-	1,965,744	-
Sale / Settlement	(257,305)	(36,790)	(417,340)	-	(711,435)	-
Transfer out (*)	-	(16,960)	-	119	(16,841)	-
December 31, 2018	₩ 5,037,128	10,191,950	778,884	139,377	16,147,339	66

	2017			
	Financial assets			Financial liabilities
	Available-for-sale financial assets	Derivative financial assets	Total	Derivative financial liabilities
January 1, 2017	₩ 11,969,493	146,513	12,116,006	14,690
Profit or loss	(29,957)	(6,020)	(35,977)	3,931
Other comprehensive income	187,895	-	187,895	-
Acquisition / Issue	2,229,908	17,139	2,247,047	-
Sale / Settlement	(259,992)	(19,282)	(279,274)	-
Transfer out (*)	(20,478)	-	(20,478)	(14,690)
December 31, 2017	₩ 14,076,869	138,350	14,215,219	3,931

(*) When significant inputs become observable market data, the level 3 financial instruments are transferred to other levels.

(iii) Changes in deferred day one profit or loss for the years ended December 31, 2018 and 2017 are as follows:

		2018	2017
Beginning balance	₩	5,538	1,155
New deferrals		-	5,796
Amortization		(389)	(259)
Others (transfer to other levels, etc.)		-	(1,154)
Ending balance	₩	5,149	5,538

Deferred day one profit or loss arose from derivative financial instruments at level 3 on the fair value hierarchy.

51. 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, 2018 and 2017 are as follows:

	Valuation technique	Input
Securities measured at FVTPL and financial assets held for trading:		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Securities measured at FVOCI and available-for-sale financial assets:		
Equity securities	Net asset value approach	Underlying asset price
Debt securities	Discounted cash flow method	Discount rate
Derivatives financial assets:		
Interest rate swaps Currency forwards and swaps Currency options Commodities options	Discounted cash flow method, Black-Scholes model, Modified Black model, Formula model	Discount rate, exchange rate, volatility, commodity index, etc.
Financial liabilities measured at FVTPL:		
Debentures	Discounted cash flow method	Discount rate

51. 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, 2018 and 2017 are as follows:

	December 31, 2018		
	Valuation technique	Unobservable input	Range (%)
Securities measured at FVTPL			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate	4.03 ~ 18.22
		Rate of increase in liquidation value	-
		Rate of increase in property disposal price	-
		Volatility	20.54 ~ 40.70
Securities measured at FVOCI			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate	3.87 ~ 18.36
		Growth rate	-
		Volatility	21.51 ~ 38.07
Loans measured at FVTPL			
Convertible bonds, etc.	Binomial model	Volatility	17.79 ~ 48.97
Derivatives financial assets			
Interest rate swaps	Discounted cash flow	Volatility	17.80 ~ 24.20
		Correlation coefficient	0.81 ~ 0.92
Interest rate options	Modified Black model	Volatility	17.80 ~ 24.20
Stock index options	Black-Scholes model	Volatility	14.70 ~ 26.50
Equity options	Discounted cash flow method and others	Volatility	24.11 ~ 25.29
Equity forward	Discounted cash flow method and others	Volatility	21.93

	December 31, 2017		
	Valuation technique	Unobservable input	Range (%)
Available-for-sale financial assets			
Equity securities	Discounted cash flow method, Relative value approach, Net asset value approach	Discount rate	3.70 ~ 20.26
		Growth rate	-
		Rate of increase in liquidation value	-
		Rate of increase in property disposal price	-
		Discount rate of rent cash flow	7.66 ~ 9.31
		Volatility	11.45 ~ 25.79
Derivatives financial assets			
Interest rate swaps	Discounted cash flow	Volatility	19.20 ~ 23.60
		Correlation coefficient	(-)0.42 ~ 0.95
Interest rate options	Modified Black model	Volatility	19.20 ~ 23.60
Stock index options	Black-Scholes model	Volatility	11.00 ~ 21.00
Equity options	Finite difference method	Volatility	16.62 ~ 57.31
		Correlation coefficient	(-)0.11 ~ 0.75

(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, 2018 and 2017 is as follows:

		December 31, 2018			
		Profit(loss) for the year		Other comprehensive income(loss)	
		Favorable change	Unfavorable change	Favorable change	Unfavorable change
Securities measured at FVTPL (*1)	₩	10,253	(8,937)	-	-
Securities measured at FVOCI (*1)		-	-	1,696,241	(362,295)
Loans measured at FVTPL		15,364	(13,617)	-	-
Derivative financial assets (*2)		10,781	(48,074)	-	-
	₩	36,398	(70,628)	1,696,241	(362,295)

		December 31, 2017			
		Profit(loss) for the year		Other comprehensive income(loss)	
		Favorable change	Unfavorable change	Favorable change	Unfavorable change
Available-for-sale financial assets (*1)	₩	-	-	928,359	(301,212)
Derivative financial assets (*2)		24,296	(97,113)	-	-
	₩	24,296	(97,113)	928,359	(301,212)

(*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 2018 and 2017, ₩ 13,004,416 million and ₩ 12,179,412 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 derivatives financial instruments are calculated by increasing and decreasing the correlation coefficient and volatility (-10~10%) which are significant unobservable inputs.

(In millions of won)

51. 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: For borrowings in Korean won, the fair value is computed using the discounted cash flow method. For borrowings in foreign currency, the fair value is computed by widely-accepted appraisal agencies upon request. 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 in Korean won, except structured debentures in Korean won, is computed using the discounted cash flow method. For structured industrial financial debentures in Korean won and industrial financial debentures in foreign currency, the fair value is computed by widely-accepted appraisal agencies upon request.
- 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, 2018 and 2017 are as follows:

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	2,583,659	4,591,570	-	7,175,229
Securities measured at amortized cost		494,518	1,201,409	-	1,695,927
Loans measured at amortized cost (*)		-	4,046,695	132,418,019	136,464,714
Other financial assets (*)		-	3,547,645	655,803	4,203,448
	₩	3,078,177	13,387,319	133,073,822	149,539,318
Financial liabilities:					
Deposits (*)	₩		1,892,885	30,559,539	32,452,424
Borrowings (*)		-	783,563	19,072,441	19,856,004
Debentures		-	120,125,942	-	120,125,942
Other financial liabilities (*)		-	2,119,990	3,019,299	5,139,289
	₩	-	124,922,380	52,651,279	177,573,659

(In millions of won)

51. Fair Value of Financial Assets and Liabilities, Continued

		December 31, 2017			
		Level 1	Level 2	Level 3	Total
Financial assets:					
Cash and due from banks (*)	₩	3,303,511	3,305,131	-	6,608,642
Held-to-maturity financial assets		2,348	10,725	-	13,073
Loans (*)		-	4,126,167	134,395,262	138,521,429
Other financial assets (*)		-	6,632,670	750,242	7,382,912
	₩	3,305,859	14,074,693	135,145,504	152,526,056
Financial liabilities:					
Deposits (*)	₩	-	1,869,256	31,173,556	33,042,812
Borrowings (*)		-	790,080	20,235,284	21,025,364
Debentures		-	118,293,776	-	118,293,776
Other financial liabilities (*)		-	4,726,539	3,407,248	8,133,787
	₩	-	125,679,651	54,816,088	180,495,739

(*) 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.

51. 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, 2018 and 2017 are as follows:

	December 31, 2018	
	Valuation technique	**Input**
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, Prepayment rate
Borrowings	Discounted cash flow method	Other spread
Other financial liabilities	Discounted cash flow method	Other spread

	December 31, 2017	
	Valuation technique	**Input**
Level 2		
Financial assets:		
Held-to-maturity financial assets	Discounted cash flow method	Discount rate
Financial liabilities:		
Debentures	Discounted cash flow method	Discount rate
Level 3		
Financial assets:		
Loans	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, Prepayment rate
Borrowings	Discounted cash flow method	Other spread
Other financial liabilities	Discounted cash flow method	Other spread

(In millions of won)

52. Categories of Financial Assets and Liabilities

Categories of financial assets and liabilities as of December 31, 2018 and 2017 are as follows:

		December 31, 2018							
		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	₩	2,583,659	-	-	-	-	4,591,570	-	7,175,229
Securities measured at FVTPL		218,981	8,290,206	-	-	-	-	-	8,509,187
Securities measured at FVOCI		-	-	-	12,647,354	10,158,322	-	-	22,805,676
Securities measured at amortized cost		-	-	-	-	-	1,695,927	-	1,695,927
Loans measured at FVTPL		-	778,884	-	-	-	-	-	778,884
Loans measured at amortized cost		4,046,695	-	-	-	-	130,198,437	-	134,245,132
Derivative financial assets		-	3,193,455	-	-	-	-	682,453	3,875,908
Other financial assets		-	-	-	-	-	4,200,101	-	4,200,101
	₩	6,849,335	12,262,545	-	12,647,354	10,158,322	140,686,035	682,453	183,286,044
Financial liabilities:									
Financial liabilities measured at FVTPL	₩	-	-	2,164,538	-	-	-	-	2,164,538
Deposits		-	-	-	-	-	32,445,775	-	32,445,775
Borrowings		-	-	-	-	-	19,809,741	-	19,809,741
Debentures		-	-	-	-	-	119,286,001	-	119,286,001
Derivative financial liabilities		-	2,799,439	-	-	-	-	433,189	3,232,628
Other financial liabilities		-	-	-	-	-	5,139,270	-	5,139,270
	₩	-	2,799,439	2,164,538	-	-	176,680,787	433,189	182,077,953

(In millions of won)

52. Categories of Financial Assets and Liabilities, Continued

		December 31, 2017								
		Cash and cash equivalents	Financial instruments held for trading	Financial instruments designated at FVTPL	Available-for-sale financial instruments	Held-to-maturity financial instruments	Loans and receivables	Financial liabilities measured at amortized cost	Hedging purpose derivative instruments	Total
Financial assets:										
Cash and due from banks	₩	3,303,511	-	-	-	-	3,305,131	-	-	6,608,642
Financial assets held for trading		444,643	482,094	-	-	-	-	-	-	926,737
Available-for- sale financial assets		-	-	-	32,062,921	-	-	-	-	32,062,921
Held-to-maturity financial assets		-	-	-	-	12,313	-	-	-	12,313
Loans		4,838,059	-	-	-	-	131,441,263	-	-	136,279,322
Derivative financial assets		-	5,628,135	-	-	-	-	-	621,474	6,249,609
Other financial assets		-	-	-	-	-	7,378,355	-	-	7,378,355
	₩	8,586,213	6,110,229	-	32,062,921	12,313	142,124,749	-	621,474	189,517,899
Financial liabilities:										
Financial liabilities designated at FVTPL	₩	-	-	1,583,713	-	-	-	-	-	1,583,713
Deposits		-	-	-	-	-	-	33,058,179	-	33,058,179
Borrowings		-	-	-	-	-	-	20,971,629	-	20,971,629
Debentures		-	-	-	-	-	-	117,818,982	-	117,818,982
Derivative financial liabilities		-	5,422,483	-	-	-	-	-	485,320	5,907,803
Other financial liabilities		-	-	-	-	-	-	8,133,810	-	8,133,810
	₩	-	5,422,483	1,583,713	-	-	-	179,982,600	485,320	187,474,116

(In millions of won)

53. Offsetting of Financial Assets and Liabilities

Details of financial instruments subject to offsetting, enforceable master netting agreements or similar agreements as of December 31, 2018 and 2017 are as follows:

	December 31, 2018						
				Related amounts not set off in the statement of financial position			
		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	Financial instruments	Cash collateral received	Net amounts
Derivative financial assets (*)	₩	3,875,908	-	3,875,908	2,572,600	38,581	1,264,727
Unsettled spot exchange receivables (*)		1,806,409	-	1,806,409	1,806,156	-	253
Unsettled domestic exchange receivables		2,911,679	1,170,443	1,741,236	-	-	1,741,236
Security pledged as collateral for repurchase agreements		4,702,089	-	4,702,089	2,211,955	-	2,490,134
Reverse repurchase agreements		1,300,000	-	1,300,000	1,300,000	-	-
Loaned securities		60,409	-	60,409	60,409	-	-
Receivables from securities transaction		37	-	37	37	-	-
	₩	14,656,531	1,170,443	13,486,088	7,951,157	38,581	5,496,350

	December 31, 2018						
				Related amounts not set off in the statement of financial position			
		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	Financial instruments	Cash collateral pledged	Net amounts
Derivative financial liabilities (*)	₩	3,232,628	-	3,232,628	2,502,877	7,849	721,902
Unsettled spot exchange payables (*)		1,807,079	-	1,807,079	1,806,156	-	923
Unsettled domestic exchange payables		1,483,354	1,170,443	312,911	-	-	312,911
Repurchase agreements		2,211,955	-	2,211,955	2,211,955	-	-
Payables from securities transaction		1,054	-	1,054	1,054	-	-
	₩	8,736,070	1,170,443	7,565,627	6,522,042	7,849	1,035,736

(In millions of won)

53. Offsetting of Financial Assets and Liabilities, Continued

	December 31, 2017						
					Related amounts not set off in the statement of financial position		
		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	Financial instruments	Cash collateral received	Net amounts
Derivative financial assets (*)	₩	6,249,609	-	6,249,609	3,869,101	271,589	2,108,919
Unsettled spot exchange receivables (*)		4,488,196	-	4,488,196	4,485,735	-	2,461
Unsettled domestic exchange receivables		3,658,339	1,513,865	2,144,474	-	-	2,144,474
Security pledged as collateral for repurchase agreements		4,612,255	-	4,612,255	3,516,978	-	1,095,277
Reverse repurchase agreements		1,448,727	-	1,448,727	1,448,727	-	-
Receivables from securities transaction		16,721	-	16,721	16,721	-	-
	₩	20,473,847	1,513,865	18,959,982	13,337,262	271,589	5,351,131

	December 31, 2017						
					Related amounts not set off in the statement of financial position		
		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	Financial instruments	Cash collateral pledged	Net amounts
Derivative financial liabilities (*)	₩	5,907,803	-	5,907,803	3,693,464	-	2,214,339
Unsettled spot exchange payables (*)		4,487,581	-	4,487,581	4,485,735	-	1,846
Unsettled domestic exchange payables		1,752,823	1,513,865	238,958	-	-	238,958
Repurchase agreements		3,516,978	-	3,516,978	3,516,978	-	-
Payables from securities transaction		18,254	-	18,254	18,254	-	-
	₩	15,683,439	1,513,865	14,169,574	11,714,431	-	2,455,143

(*) 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.

(In millions of won)

54. 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:

Segments	General information
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, 2018 and 2017 are as follows:

		2018				
		Corporate finance	Investment finance	Asset management	Others	Total
Operating income (loss) from external customers	₩	985,690	(137,207)	42,633	619,943	1,511,059
Operating income (loss) from intersegment sales		52,980	59,589	-	(112,569)	-
	₩	1,038,670	(77,618)	42,633	507,374	1,511,059

		2017				
		Corporate finance	Investment finance	Asset management	Others	Total
Operating income from external customers	₩	874,426	78,812	34,930	486,582	1,474,750
Operating income (loss) from intersegment sales		(9,836)	(17,396)	-	27,232	-
	₩	864,590	61,416	34,930	513,814	1,474,750

(In millions of won)

54. Operating Segments, Continued

(3) Details of segment results for the Bank's reportable segments for the years ended December 31, 2018 and 2017 are as follows:

		2018				
		Corporate finance	Investment finance	Asset management	Others	Total
Net interest income	₩	1,515,000	(669,023)	20,715	516,094	1,382,786
Non-interest income						
Income related to securities (*1)		85,091	(106,628)	-	27,692	6,155
Other non-interest income		202,058	1,144,553	32,358	(26,585)	1,352,384
		287,149	1,037,925	32,358	1,107	1,358,539
Provision for loan losses and others (*2)		(205,849)	(348,368)	-	(365)	(554,582)
General and administrative expenses		(557,630)	(98,152)	(10,440)	(9,462)	(675,684)
Operating income	₩	1,038,670	(77,618)	42,633	507,374	1,511,059

		2017				
		Corporate finance	Investment finance	Asset management	Others	Total
Net interest income	₩	1,584,329	(397,111)	19,451	279,702	1,486,371
Non-interest income						
Income related to securities (*1)		13,068	788,838	-	61,003	862,909
Other non-interest income		220,479	902,685	25,406	172,505	1,321,075
		233,547	1,691,523	25,406	233,508	2,183,984
Provision for loan losses and others (*2)		(406,467)	(1,132,006)	-	4,164	(1,534,309)
General and administrative expenses		(546,819)	(100,990)	(9,927)	(3,560)	(661,296)
Operating income	₩	864,590	61,416	34,930	513,814	1,474,750

(*1) Income related to securities is composed of net gain (loss) on securities measured at FVTPL (financial assets held for trading for the year ended December 31, 2017), securities measured at FVOCI (available-for-sale financial assets for the year ended December 31, 2017) and securities measured at amortized cost (held-to maturity financial assets for the year ended December 31, 2017).

(*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.

(In millions of won)

54. Operating Segments, Continued

(4) Geographical revenue information about the Bank's operating segments for the years ended December 31, 2018 and 2017 and the geographical non-current asset information as of December 31, 2018 and 2017 are as follows:

		Revenues (*1)		Non-current assets (*2)	
		2018	**2017**	**December 31, 2018**	**December 31, 2017**
Domestic	₩	18,125,443	24,860,929	26,369,930	23,505,974
Overseas		816,723	650,840	4,608	5,192
	₩	18,942,167	25,511,769	26,374,537	23,511,166

(*1) Revenues consist of interest income, fees and commission income, dividend income, income related to securities, foreign currency transaction gain, gain on derivatives, 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.

55. 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 five 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 and Risk Management Practice 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.

The Bank's Risk Management Practice Committee is composed of the planning department's leaders of main business segments. The Risk Management Practice Committee exercises its role to preliminarily review matters for main decision of the Risk Management Committee.

55. 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, 2017, the key activities of the Risk Management Committee are as follows:

- Major decision
  - Risk management plan for 2018
  - Setting and managing exposure limits by country for 2018
  - Contingency funding plan for 2018
  - Adjustment of exposure limits for Vietnam in 2018
  - Change in the standard of managing exposure by country
  - Change in estimation criteria of risk components to calculate the IFRS 9 loss allowance

- Major considerations
  - Amendment of risk management by laws

- Major reporting
  - Management plan of credit portfolio for 2018
  - Integrated crisis analysis in the second half of 2017 and the first half of 2018
  - The result of assessment of suitability for internal capital in 2017
  - Resolution of Credit Committee on a quarterly basis
  - The result of the verification on suitability of Credit Rating System, PD and internal purpose risk components
  - The plan of internal capital allocation for 2018
  - Change in management plan of credit portfolio
  - Appointment of locum tenens in case of absence of chairman of risk management committee
  - The result of the annual corporate credit rating for 2018
  - The plan of emergency response of BIS ratio

(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 2019 on September 2018

- 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

55. 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	Jun. 2004	Calculate corporate credit rating
		Mar. 2008	
		Mar. 2010	
		Mar. 2012	Corporate credit rating system build-up based on K-IFRS
		Oct. 2017	Rebuilding the Corporate Credit Rating System
Credit Risk Measurement System	Credit Risk+	Jul. 2003	Summarize exposures, manage exposure limits and calculate Credit VaR
	Credit Metrics	Nov. 2007	
Market Risk Management System	Risk Watch	Jun. 2002	Summarize position, manage exposure limits and calculate Market VaR
	RS Model	Sep. 2012	Calculate regulatory capital by Standardized Approach
	Murex M/O	Apr. 2013	Supplement of RiskWatch to calculate VaR
Interest/Liquidity Risk Management System	OFSA	Feb. 2006	Calculate repricing gap, duration gap, VaR and EaR
	Fermat	Mar. 2014	System update for liquidity risk following Basel III
Operational Risk Management System	Standardized Approach	May. 2006	Manage process and calculate CSA, KRI and OPVaR
	AMA	May. 2009	Pre-operate the AMA
BIS Capital Ratio Calculation System	Fermat	Sep. 2006	Calculate equity and credit risk-weighted assets
	RaY	Dec. 2013	
Loan Loss Allowance Calculation System	IAS 39	Jan. 2011	Incurred loss model
	IFRS 9	Mar. 2017	Expected credit loss model (Implemented in 2018)

(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.

In addition, the Bank is responding to revised standards such as capital requirements for banks' equity investments in funds, which will take effect in 2017, and the Standardised Approach for measuring counterparty credit risk (SA-CCR), which will take effect in 2019.

55. 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.

- 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 four stages of 'normal-aggravation-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.

(In millions of won)

55. 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 regularly and 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.

Under the early warning system, a borrower that is highly likely to be insolvent is classified as an early warning borrower or a precautionary borrower. 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, 2018 are as follows:

< Corporate >

		December 31, 2018			
			12-month	Lifetime expected credit losses	
		Carrying amounts	expected credit loss	Non credit-impaired	Credit-impaired
AAA ~ BBB1	₩	103,949,845	101,908,193	2,041,652	-
BBB2 ~ CCC		29,087,682	18,078,425	10,903,401	105,856
Below CC		4,090,062	-	1,802,024	2,288,038
	₩	137,127,589	119,986,618	14,747,077	2,393,894

(In millions of won)

55. Risk Management, Continued

< Retail >

		December 31, 2018			
				Lifetime expected credit losses	
		Carrying amounts	12-month expected credit loss	Non credit-impaired	Credit-impaired
Grade 1~ Grade 6	₩	634,659	599,333	35,030	296
Grade 7~ Grade 8		11,975	-	11,947	28
Grade 9~ Grade 10		1,392	-	-	1,392
	₩	648,026	599,333	46,977	1,716

Details of payment guarantees (including financial guarantees) and unused commitments by credit rating as of December 31, 2018 are as follows:

< Corporate >

		December 31, 2018			
				Lifetime expected credit losses	
		Exposures	12-month expected credit loss	Non credit-impaired	Credit-impaired
Unused commitments:					
AAA ~ BBB1	₩	24,367,025	24,164,769	202,256	-
BBB2 ~ CCC		3,279,084	1,294,582	1,984,502	-
Below CC		199,897	88,524	110,388	985
		27,846,006	25,547,875	2,297,146	985
Payment guarantees (including financial guarantees):					
AAA ~ BBB1		4,841,683	4,806,169	35,436	78
BBB2 ~ CCC		4,914,971	2,346,844	2,568,127	-
Below CC		1,573,186	585,025	482,805	505,356
	₩	11,329,840	7,738,038	3,086,368	505,434

< Retail >

		December 31, 2018			
				Lifetime expected credit losses	
		Exposures	12-month expected credit loss	Non credit-impaired	Credit-impaired
Unused commitments:					
Grade 1~ Grade 6	₩	86,652	84,417	2,235	-
Grade 7~ Grade 8		31	-	31	-
Grade 9~ Grade 10		-	-	-	-
	₩	86,683	84,417	2,266	-

Details of loans as of December 31, 2017 are as follows:

		December 31, 2017
Neither past due nor impaired	₩	134,017,850
Past due but not impaired		79,422
Impaired		5,907,948
		140,005,220
Allowance for loan losses		(3,515,453)
Present value discount		(215,809)
Deferred loan origination costs and fees		5,364
Net value	₩	136,279,322
Ratio of allowance for loan losses to total loans		2.51%

(In millions of won)

55. Risk Management, Continued

Loans that are neither past due nor impaired as of December 31, 2017 are as follows:

		December 31, 2017					
	Loans in Korean won				Other loans		
	Loans for working capital	Loans for facility development	Others	Loans in foreign currencies	Privately placed corporate bonds	Others	Total
AAA ~ B-	₩ 43,629,209	46,555,052	3,647,881	23,814,695	1,059,912	10,763,637	129,470,386
CCC	1,902,339	114,993	-	1,369,865	70,398	142,237	3,599,832
CC	378,016	164,281	-	200,848	-	204,487	947,632
C	-	-	-	-	-	-	-
D	-	-	-	-	-	-	-
	₩ 45,909,564	46,834,326	3,647,881	25,385,408	1,130,310	11,110,361	134,017,850

Loans that are past due but not impaired as of December 31, 2017 are as follows:

		December 31, 2017					
	Loans in Korean won				Other loans		
	Loans for working capital	Loans for facility development	Others	Loans in foreign currencies	Privately placed corporate bonds	Others	Total
Within 30 days	₩ 12,918	18,450	7,278	19,172	1,000	12,291	71,109
30 ~ 60 days	62	825	944	-	-	111	1,942
60 ~ 90 days	511	5,848	12	-	-	-	6,371
	₩ 13,491	25,123	8,234	19,172	1,000	12,402	79,422

Impaired loans as of December 31, 2017 are as follows:

		December 31, 2017					
	Loans in Korean won				Other loans		
	Loans for working capital	Loans for facility development	Others	Loans in foreign currencies	Privately placed corporate bonds	Others	Total
Impaired loans:							
Individual	₩ 2,064,364	2,127,552	-	364,599	790,687	350,544	5,697,746
Collective	85,596	45,003	1,946	52,805	15,311	9,541	210,202
	₩ 2,149,960	2,172,555	1,946	417,404	805,998	360,085	5,907,948

(In millions of won)

55. 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-	20.00%	0.00%	20.00%
A+ ~ A-	50.00%	20.00%	50.00%
BBB+ ~ BBB-	100.00%	50.00%	100.00%
BB+ ~ BB-	100.00%	100.00%	100.00%
B+ ~ B-	150.00%	100.00%	100.00%
Below B-	150.00%	150.00%	150.00%
Unrated	100.00%	100.00%	100.00%

The OECD, S&P, Moody's and Fitch are 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.

55. 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, 2018.

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 and banks
	SA	- Overseas subsidiaries and branches, and other assets
Foundation Internal Ratings-Based Approach		- Corporate, small and medium enterprises, asset securitization and equity
Application of IRB by phase		- Special lending, non-residence, non-bank financial institutions

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.

(In millions of won)

55. Risk Management, Continued

Exposure after credit risk mitigation by asset type as of December 31, 2018 and 2017 are as follows:

		December 31, 2018		
		Exposure	Credit risk mitigation	Exposure after credit risk mitigation
Government	₩	13,230,661	-	13,230,661
Bank		19,505,950	-	19,505,950
Corporate		131,020,852	(265,704)	130,755,148
Stock		32,967,228	-	32,967,228
Indirect investments		10,478,914	(2,548,734)	7,930,180
Asset securitization		2,551,803	-	2,551,803
Over-the-counter derivatives		9,938,599	(4,341,666)	5,596,933
Retail assets		672,748	(25,407)	647,341
Others		45,038,289	(129,125)	44,909,164
	₩	265,405,044	(7,310,636)	258,094,408

		December 31, 2017		
		Exposure	Credit risk mitigation	Exposure after credit risk mitigation
Government	₩	15,492,552	-	15,492,552
Bank		19,519,149	-	19,519,149
Corporate		129,607,364	(298,540)	129,308,824
Stock		29,785,368	-	29,785,368
Indirect investments		7,672,509	(1,645,991)	6,026,518
Asset securitization		4,366,731	-	4,366,731
Over-the-counter derivatives		11,620,076	(5,036,913)	6,583,163
Retail assets		1,525,960	(26,260)	1,499,700
Others		46,602,601	(460,376)	46,142,225
	₩	266,192,310	(7,468,080)	258,724,230

(In millions of won)

55. 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 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 (Credit Rating Officer) 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, 2018 are as follows:

		December 31, 2018
Securities measured at FVOCI	₩	70,845
Loans measured at amortized cost		2,422,074
Other assets		175,146

(In millions of won)

55. Risk Management, Continued

(iv) *Credit exposure*

Geographical information of credit exposure as of December 31, 2018 and 2017 are as follows:

		December 31, 2018				
		Korea	UK	USA	Others	Total
Due from banks (excluding due from BOK)	₩	2,963,080	176,732	93,649	484,210	3,717,671
Securities measured at FVOCI:						
Bonds (excluding government bonds)		8,104,236	726,131	622,036	553,182	10,005,585
Securities measured at amortized cost:						
Bonds (excluding government bonds)		-	-	-	-	-
Loans		127,656,437	1,147,917	964,356	4,944,729	134,713,439
Derivative financial assets		677,407	3,283	-	1,853	682,543
Other assets		4,345,101	68,792	17,254	60,128	4,491,275
		143,746,261	2,122,855	1,697,295	6,044,102	153,610,513
Guarantees		11,231,087	-	81,357	17,397	11,329,841
Commitments		28,960,273	267,710	105,588	619,713	29,953,284
		40,191,360	267,710	186,945	637,110	41,283,125
	₩	183,937,621	2,390,565	1,884,240	6,681,212	194,893,638

		December 31, 2017				
		Korea	UK	USA	Others	Total
Due from banks (excluding due from BOK)	₩	3,603,430	3,237	101,001	680,679	4,388,347
Available-for-sale financial assets:						
Bonds (excluding government bonds)		9,352,893	633,974	608,602	370,648	10,966,117
Held-to-maturity financial assets:						
Bonds (excluding government bonds)		-	-	-	10,725	10,725
Loans		130,150,253	1,072,177	748,063	4,491,908	136,462,401
Derivative financial assets		615,912	3,722	-	2,032	621,666
Other assets		7,549,444	22,361	12,818	32,367	7,616,990
		151,271,932	1,735,471	1,470,484	5,588,359	160,066,246
Guarantees		11,010,380	-	137,907	136,129	11,284,416
Commitments		5,816,367	59,319	65,747	416,104	6,357,537
		16,826,747	59,319	203,654	552,233	17,641,953
	₩	168,098,679	1,794,790	1,674,138	6,140,592	177,708,199

(In millions of won)

55. Risk Management, Continued

Industry information of credit exposure as of December 31, 2018 and 2017 are as follows:

		December 31, 2018			
		Manufacturing	Service	Others	Total
Due from banks (excluding due from BOK)	₩	-	1,264,970	2,452,701	3,717,671
Securities measured at FVOCI:					
Bonds (excluding government bonds)		2,390,829	6,367,151	1,247,605	10,005,585
Securities measured at amortized cost:					
Bonds (excluding government bonds)		-	-	-	-
Loans		60,756,349	63,944,732	10,012,358	134,713,439
Derivative financial assets		-	682,543	-	682,543
Other assets		124,653	208,618	4,158,004	4,491,275
		63,271,831	72,468,014	17,870,668	153,610,513
Guarantees		9,194,253	1,695,077	440,511	11,329,841
Commitments		286,735	4,875,573	24,790,976	29,953,284
		9,480,988	6,570,650	25,231,487	41,283,125
	₩	72,752,819	79,038,664	43,102,155	194,893,638

		December 31, 2017			
		Manufacturing	Service	Others	Total
Due from banks (excluding due from BOK)	₩	-	4,022,093	366,254	4,388,347
Available-for-sale financial assets:					
Bonds (excluding government bonds)		2,683,738	7,094,979	1,187,400	10,966,117
Held-to-maturity financial assets:					
Bonds (excluding government bonds)		-	10,725	-	10,725
Loans		62,566,742	63,829,681	10,065,978	136,462,401
Derivative financial assets		-	621,666	-	621,666
Other assets		138,509	196,787	7,281,694	7,616,990
		65,388,989	75,775,931	18,901,326	160,066,246
Guarantees		8,933,696	1,806,124	544,596	11,284,416
Commitments		207,903	6,016,498	133,136	6,357,537
		9,141,599	7,822,622	677,732	17,641,953
	₩	74,530,588	83,598,553	19,579,058	177,708,199

(In millions of won)

55. Risk Management, Continued

Credit exposures of debt securities by credit rating as of December 31, 2018 are as follows:

		December 31, 2018			
			12-month	Lifetime expected credit losses	
		Carrying amounts	expected credit loss	Non credit-impaired	Credit-impaired
AAA ~ BBB1	₩	13,963,900	13,874,950	88,950	-
BBB2 ~ CCC		11,717	11,654	63	-
Below CC		-	-	-	-
	₩	13,975,617	13,886,604	89,013	-

Credit exposures of due from banks and debt securities by credit rating as of December 31, 2017 are as follows:

		December 31, 2017			
		Due from banks	Available-for-sale financial assets	Held-to-maturity financial assets	Total
AAA ~ AA-	₩	126,594	2,031,854	-	2,158,448
A+ ~ A-		1,750,534	3,825,206	-	5,575,740
BBB+ ~ BB-		1,166,917	3,542,568	10,725	4,720,210
Below BB-		-	30,292	-	30,292
Unrated		1,344,302	1,536,197	-	2,880,499
	₩	4,388,347	10,966,117	10,725	15,365,189

(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, qualifying non-controlling interests in subsidiaries, 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.

(In millions of won)

55. Risk Management, Continued

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.

The BIS capital adequacy ratio and capital in accordance to Basel III standards as of December 31, 2018 and 2017 are as follows:

BIS capital adequacy ratio

		December 31, 2018	December 31, 2017
Equity capital based on BIS (A):			
Tier 1 capital:			
Common Equity Tier 1	₩	29,522,899	29,412,410
Additional Tier 1 capital		-	4,327
		29,522,899	29,416,737
Tier 2 capital		4,909,582	4,638,109
	₩	34,432,481	34,054,846
Risk-weighted assets (B):			
Credit risk-weighted assets	₩	226,000,042	216,003,011
Market risk-weighted assets		2,005,094	2,413,057
Operational risk-weighted assets		4,621,678	4,801,430
	₩	232,626,814	223,217,498
BIS capital adequacy ratio (A/B):		14.80%	15.26%
Tier 1 capital ratio:		12.69%	13.18%
Common Equity Tier 1 ratio		12.69%	13.18%
Additional Tier 1 capital ratio		-	-
Tier 2 capital ratio		2.11%	2.08%

Equity capital based on BIS

		December 31, 2018	December 31, 2017
Tier 1 capital (A=C+D):			
Common Equity Tier 1 (C)			
Capital stock	₩	18,108,099	17,938,099
Capital surplus, etc.		1,496,704	1,548,609
Retained earnings		9,796,197	9,023,996
Non-controlling interests		-	2,639
Accumulated other comprehensive income		335,744	1,048,942
Common stock deductibles		(213,845)	(149,875)
		29,522,899	29,412,410
Additional Tier 1 capital (D)			
Non-controlling interests		-	4,327
		29,522,899	29,416,737
Tier 2 capital (B):			
Allowance for doubtful accounts, etc.		977,343	447,445
Qualified capital securities		2,900,000	2,900,000
Non-qualified capital securities		1,032,239	1,290,298
Non-controlling interests		-	366
		4,909,582	4,638,109
Equity capital (A+B)	₩	34,432,481	34,054,846

(In millions of won)

55. Risk Management, Continued

(4) Market risk

(i) Concept

Market risk is defined as the possibility of potential loss on a trading position resulting from fluctuations in interest rates, foreign exchange rates and the price of stocks 1and derivatives. 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.

Market risk required capital

The Bank's Market risk required capital as of December 31, 2018 and 2017 are as follows:

		December 31, 2018	December 31, 2017
Interest rate	₩	65,146	53,628
Stock price		510	50,111
Foreign exchange rate		18,241	15,120
Option		61,800	60,891
	₩	145,697	179,750

(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 interest rate VaR and interest rate EaR.

Interest rate VaR is the maximum amount of decrease in net asset value resulting from the unfavorable fluctuation of interest rate. Interest rate EaR is the maximum amount of decrease in net interest income resulting from the unfavorable fluctuation of interest rate for a year.

The Bank's interest rate VaR and interest rate EaR are measured through the simulation of conclusive interest rate scenario with the FERMAT and are monthly reported to the Risk Management Committee. The Management's target of interest rate VaR and interest rate EaR are approved at the beginning of the year. Additionally, the interest rate VaR and interest rate EaR on consolidated basis are calculated using the Standardized Approach to retain the consistency in the methods used by the Bank and its subsidiaries.

VaR/EaR of non-trading positions

The Bank's interest rate VaR and EaR of non-trading positions as of December 31, 2018 and 2017 are as follows:

December 31, 2018			
Interest rate shock		Interest rate VaR	Interest rate EaR
2.00%	₩	655,432	63,847

December 31, 2017			
Interest rate shock		Interest rate VaR	Interest rate EaR
2.00%	₩	856,927	26,219

(In millions of won)

55. Risk Management, Continued

(iv) *Foreign currency risk*

Outstanding balances by currency with significant exposure as of December 31, 2018 and 2017 are as follows:

		December 31, 2018						
		KRW	USD	EUR	JPY	GBP	Others	Total
Financial assets:								
Cash and due from banks	₩	3,545,017	3,423,903	22,007	40,910	7,741	135,651	7,175,229
Securities measured at FVTPL		7,920,316	498,126	26,074	45	-	64,626	8,509,187
Securities measured at FVOCI		19,023,442	3,614,327	24	167,883	-	-	22,805,676
Securities measured at amortized cost		1,695,927	-	-	-	-	-	1,695,927
Loans measured at FVTPL		778,884	-	-	-	-	-	778,884
Loans measured at amortized cost		99,266,540	32,081,124	1,172,793	1,035,489	285,038	404,148	134,245,132
Derivative financial assets		3,169,723	668,497	23,333	3,214	7,175	3,966	3,875,908
Other financial assets		3,503,783	553,615	11,442	44,919	325	86,017	4,200,101
		138,903,632	40,839,592	1,255,673	1,292,460	300,279	694,408	183,286,044
Financial liabilities:								
Financial liabilities measured at FVTPL		1,905,252	259,286	-	-	-	-	2,164,538
Deposits		25,306,191	6,798,287	5,160	334,374	185	1,578	32,445,775
Borrowings		6,154,890	12,668,379	125,215	855,910	-	5,347	19,809,741
Debentures		95,115,858	16,725,220	1,446,877	650,818	369,533	4,977,695	119,286,001
Derivative financial liabilities		2,402,018	813,032	10,414	1,653	2,706	2,805	3,232,628
Other financial liabilities		3,059,512	1,845,302	38,281	17,069	290	178,816	5,139,270
		133,943,721	39,109,506	1,625,947	1,859,824	372,714	5,166,241	182,077,953
Net financial position	₩	4,959,911	1,730,086	(370,274)	(567,364)	(72,435)	(4,471,833)	1,208,091

		December 31, 2017						
		KRW	USD	EUR	JPY	GBP	Others	Total
Financial assets:								
Cash and due from banks	₩	3,686,931	2,609,945	38,551	22,349	4,711	246,155	6,608,642
Financial assets held for trading		532,899	341,291	37,013	-	-	15,534	926,737
Available-for-sale financial assets		28,346,164	3,551,367	22	130,433	-	34,935	32,062,921
Held-to-maturity financial assets		1,588	10,725	-	-	-	-	12,313
Loans		101,055,808	32,548,067	1,061,489	1,100,855	167,344	345,759	136,279,322
Derivative financial assets		5,589,047	637,902	13,200	3,939	2,103	3,418	6,249,609
Other financial assets		4,667,246	2,138,600	204,406	86,214	5,245	276,644	7,378,355
		143,879,683	41,837,897	1,354,681	1,343,790	179,403	922,445	189,517,899
Financial liabilities:								
Financial liabilities designated at FVTPL		1,434,567	149,146	-	-	-	-	1,583,713
Deposits		26,339,896	6,427,270	22,876	266,509	432	1,196	33,058,179
Borrowings		8,095,006	12,078,010	41,795	748,354	-	8,464	20,971,629
Debentures		94,398,139	15,371,088	1,623,208	367,484	805,053	5,254,010	117,818,982
Derivative financial liabilities		5,240,676	649,181	12,016	2,690	2,444	796	5,907,803
Other financial liabilities		4,730,832	2,905,457	182,281	54,005	1,968	259,267	8,133,810
		140,239,116	37,580,152	1,882,176	1,439,042	809,897	5,523,733	187,474,116
Net financial position	₩	3,640,567	4,257,745	(527,495)	(95,252)	(630,494)	(4,601,288)	2,043,783

55. 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, foreign currency liquidity ratio, and remaining maturity gap
- 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
- Foreign currency liquidity ratio: (Maturing liquidity asset in the interval / Maturing liquidity liability in the interval) X 100
- Remaining maturity gap: (Maturing liquidity asset in the interval - Maturing liquidity liability in the interval) / total assets X 100

Early warning indicator
To identify prematurely and cope with worsening liquidity risk trends, the Bank has set up 17 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 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.

(In millions of won)

55. Risk Management, Continued

(iii) Analysis on remaining contractual maturity of financial instruments

Remaining contractual maturity risks of non-derivative financial instruments including interest payment as of December 31, 2018 and 2017 are as follows:

		December 31, 2018					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	5,907,412	353,616	260,971	632,526	37,127	7,191,652
Securities measured at FVTPL		11,050,975	-	-	-	-	11,050,975
Securities measured at FVOCI		316,917	1,300,685	3,482,140	6,740,967	12,537,079	24,377,788
Securities measured at amortized cost		779	5,308	772,481	958,878	-	1,737,446
Loans		11,797,900	13,603,631	48,137,262	54,905,886	16,736,033	145,180,712
Other financial assets		3,550,822	-	-	-	660,913	4,211,735
	₩	32,624,805	15,263,240	52,652,854	63,238,257	29,971,152	193,750,308
Financial liabilities:							
Financial liabilities measured at FVTPL	₩	74,835	388,921	736,432	695,138	638,192	2,533,518
Deposits		14,854,184	4,042,772	10,658,282	3,409,477	136,453	33,101,168
Borrowings		2,965,383	4,902,196	7,305,243	3,667,532	1,330,094	20,170,448
Debentures		6,115,172	10,279,224	41,075,240	57,634,034	11,581,284	126,684,954
Other financial liabilities		2,930,288	2,006,912	-	-	214,750	5,151,950
	₩	26,939,862	21,620,025	59,775,197	65,406,181	13,900,773	187,642,038

		December 31, 2017					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Financial assets:							
Cash and due from banks	₩	5,590,394	192,338	504,039	321,796	13,703	6,622,270
Financial assets held for trading		926,678	-	-	-	-	926,678
Available-for-sale financial assets		287,400	1,537,734	6,764,184	8,995,777	15,848,543	33,433,638
Held-to-maturity financial assets		1,504	-	10,848	115	-	12,467
Loans		12,524,041	14,449,933	49,137,375	54,726,337	15,952,742	146,790,428
Other financial assets		6,634,313	-	-	-	750,845	7,385,158
	₩	25,964,330	16,180,005	56,416,446	64,044,025	32,565,833	195,170,639
Financial liabilities:							
Financial liabilities designated at FVTPL	₩	69,285	263,040	587,957	416,339	662,446	1,999,067
Deposits		14,237,933	6,423,163	9,678,063	3,117,355	147,189	33,603,703
Borrowings		3,558,421	4,189,089	7,898,567	4,340,343	1,435,422	21,421,842
Debentures		6,401,501	10,955,197	44,473,217	46,565,221	16,852,878	125,248,014
Other financial liabilities		5,865,093	1,820,414	-	-	456,243	8,141,750
	₩	30,132,233	23,650,903	62,637,804	54,439,258	19,554,178	190,414,376

(In millions of won)

55. Risk Management, Continued

Remaining contractual maturity risks of derivative financial instruments as of December 31, 2018 and 2017 are as follows:

Net settlement of derivative financial instruments

		December 31, 2018					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency	₩	19	267	768	-	-	1,054
Interest rate		13,519	27,707	(67,905)	285,977	235,630	494,928
Stock		14	-	-	-	-	14
Hedging purpose derivatives:							
Interest rate		11,764	(4,700)	209,299	1,259,508	2,288,782	3,764,653
	₩	25,316	23,274	142,162	1,545,485	2,524,412	4,260,649

		December 31, 2017					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency	₩	(79)	498	(129)	-	-	290
Interest rate		(3,242)	(2,210)	(86,807)	(112,351)	(40,505)	(245,115)
Stock		134	-	-	-	-	134
Hedging purpose derivatives:							
Interest rate		20,569	19,411	134,695	1,127,275	2,480,383	3,782,333
	₩	17,382	17,699	47,759	1,014,924	2,439,878	3,537,642

(In millions of won)

55. Risk Management, Continued

Gross settlement of derivative financial instruments

		December 31, 2018					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	44,391,921	33,891,349	58,815,290	57,202,816	5,725,750	200,027,126
Outflow		44,408,875	33,833,123	58,659,690	57,186,864	5,792,977	199,881,529
Hedging purpose derivatives:							
Currency							
Inflow		46,574	252,017	6,113,586	15,160,421	1,352,371	22,924,969
Outflow		57,180	263,943	6,133,158	15,110,967	1,352,215	22,917,463
Total inflow	₩	44,438,495	34,143,366	64,928,876	72,363,237	7,078,121	222,952,095
Total outflow	₩	44,466,055	34,097,066	64,792,848	72,297,831	7,145,192	222,798,992

		December 31, 2017					
		Within 1 month	1~3 months	3~12 months	1~5 Years	Over 5 years	Total
Trading purpose derivatives:							
Currency							
Inflow	₩	39,285,254	35,664,287	67,286,704	51,321,999	5,411,444	198,969,688
Outflow		39,393,627	35,877,527	67,746,331	51,188,768	5,491,291	199,697,544
Hedging purpose derivatives:							
Currency							
Inflow		34,137	338,206	11,887,281	8,582,741	1,464,554	22,306,919
Outflow		34,608	359,082	11,987,081	8,453,255	1,439,125	22,273,151
Total inflow	₩	39,319,391	36,002,493	79,173,985	59,904,740	6,875,998	221,276,607
Total outflow	₩	39,428,235	36,236,609	79,733,412	59,642,023	6,930,416	221,970,695

Remaining contractual maturity risks of guarantees and commitments as of December 31, 2018 and 2017 are as follows:

		December 31, 2018					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	1,216,626	1,857,438	4,375,807	3,851,524	28,446	11,329,841
Commitments		115,917	90,056	882,736	2,029,013	26,835,562	29,953,284
	₩	1,332,543	1,947,494	5,258,543	5,880,537	26,864,008	41,283,125

		December 31, 2017					
		Within 1 month	1~3 months	3~12 months	1~5 years	Over 5 years	Total
Guarantees	₩	1,749,883	1,423,597	3,756,986	4,325,805	28,145	11,284,416
Commitments		289,450	166,927	1,612,032	2,135,849	2,153,279	6,357,537
	₩	2,039,333	1,590,524	5,369,018	6,461,654	2,181,424	17,641,953

56. Events after the Reporting Period

(i) DSME Sell-off Agreement with Hyundai Heavy Industries Co., Ltd.

In an effort of attracting strategic investments in the Daewoo Shipbuilding & Marine Engineering Co., Ltd. (“DSME”), the Bank’s subsidiary, the Bank signed a memorandum of understanding on January 31, 2019 and entered into an official agreement (“the Agreement”) to sell off its stake in DSME with Hyundai Heavy Industries Co., Ltd. ("HHI") on March 8, 2019. According to the Agreement, the HHI will split the shipbuilding business, special & naval ship business, industrial plant & engineering business and engine & machinery business, excluding investment business and so on, into a newly established company, and the existing company after the split-off will be transferred to a holding company defined in the “Monopoly Regulation and Fair Trade Act”. The Bank will provide its DSME stake to the HHI as a contribution in kind. In return, the Bank will acquire newly issued common shares and redeemable convertible preference shares of HHI. Rights offering of both HHI and DSME will be executed and the HHI will bear the responsibility of financial support for the DSME.

To finalize the Agreement, some prerequisites such as approval process of government bodies, e.g. domestic or foreign approval of business combination, etc., should be met.

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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, 2018. 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, 2018 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, 2018 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, 2018. We did not review the Bank's ICFR subsequent to December 31, 2018.

Nexia Samduk

Seoul, Korea
March 28, 2019

KDB Bank

ICFR Operating Status Report by CEO and ICFR Officer

To the Shareholders, Board of Directors and Audit Committee

As the CEO and the ICFR Officer of KDB, assessed operating status of KDB's ICFR for the year ending December 31, 2018.

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, 2018 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 26 ,2019

Dong-Gull Lee

Chairman & CEO

K. Y. Kim

Internal Control over Financial Reporting Officer

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