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 an underwriter or any affiliate of an underwriter is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by such 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 nor The Hongkong and Shanghai Banking Corporation Limited, Société Générale, Standard Chartered Bank and KEXIM Bank (UK) Limited (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.

OFFERING CIRCULAR **STRICTLY CONFIDENTIAL**

Doosan Power Systems S.A.

(a public limited liability company, organized and existing under the laws of the Grand Duchy of Luxembourg)

US$300,000,000 Guaranteed Senior Capital Securities
Unconditionally and Irrevocably Guaranteed by

The Export-Import Bank of Korea

(a statutory juridical entity established under The Export-Import Bank of Korea Act of 1969, as amended, in the Republic of Korea)

Issue Price: 99.677%

The US$300,000,000 Guaranteed Senior Capital Securities (the "Securities") will be issued by Doosan Power Systems S.A. (the "Issuer") and unconditionally and irrevocably guaranteed by The Export-Import Bank of Korea (the "Guarantor" or the "Bank," and such guarantee, the "Guarantee"). The Securities constitute unconditional, unsecured and unsubordinated obligations of the Issuer and will at all times rank *pari passu* without any preference among themselves and *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer, except as may be required by mandatory provisions of law. The Guarantee relating to the Securities 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 Securities confer a right to receive cumulative interest at the following interest rates: (i) from (and including) October 25, 2018 (the "Issue Date") to (but excluding) October 25, 2021 (the "First Call Date"), at 3.750% per annum; and (ii) from (and including) the First Call Date to (but excluding) the immediately following Reset Date and thereafter from (and including) each Reset Date to (but excluding) the next following Reset Date, at a fixed rate equivalent to the prevailing 3-year Treasury Rate plus the Initial Credit Spread plus the Step Up Margin, in each case on the Principal Amount of each Security. Terms relating to the Securities and not otherwise defined have the meanings given to them in "*Terms and Conditions of the Securities*."

Subject to the provisions of the Securities relating to deferral of interest payments at the sole discretion of the Issuer (see "*Terms and Conditions of the Securities — Interest — Optional deferral of interest*"), interest shall be payable semi-annually in arrear on April 25 and October 25 of each year (each an "Interest Payment Date," with the first Interest Payment Date falling on April 25, 2019 in respect of the period from and including the Issue Date to but excluding such Interest Payment Date).

Unless redeemed or purchased and cancelled earlier in accordance with the terms of the Securities, the Issuer may redeem the Securities on October 25, 2048 at their Principal Amount plus any Interest Amount accrued up to (but excluding) such date and any outstanding Deferred Interest and, if not redeemed, at the end of each subsequent 30-year period (each of such dates, an "Issuer Redemption Date") provided that, if the Securities are not redeemed at the option of the Issuer on an Issuer Redemption Date, the Securities will automatically be extended for 30 years from such date. The Issuer may redeem the Securities (in whole but not in part), on the First Call Date or on any Interest Payment Date thereafter at their Principal Amount plus any Interest Amount accrued up to (but excluding) such date and any outstanding Deferred Interest upon giving the Holders of the Securities, the Agents and the Guarantor not less than 30 and not more than 60 calendar days' irrevocable notice of redemption. The Securities may, subject to applicable laws, also be redeemed (in whole but not in part) at any time, on giving not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders of the Securities and the Agents, at the option of the Issuer at the Principal Amount of the Securities plus any Interest Amount accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest, if (i) a Gross-Up Event occurs or (ii) a Tax Event or an Accounting Event occurs.

Each Holder of Securities will have the right to require the Guarantor to purchase (in whole but not in part) the Securities held by the Holder at their Principal Amount plus any Interest Amount accrued up to (but excluding) the relevant Put Date and any outstanding Deferred Interest, if (i) a Bankruptcy Event occurs at any time from the Issue Date to 30 days prior to the First Call Date or (ii) the Issuer elects not to redeem the Securities on the First Call Date. See "*Terms and Conditions of the Securities — Redemption, Purchase and Put — Put Right.*"

Investing in the Securities involves certain risks. See "*Risk Factors*" beginning on page 7.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "SGX-ST") for the listing and quotation of the Securities 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 Securities on, the SGX-ST are not to be taken as an indication of the merits of the Issuer, the Guarantor or the Securities.

The Securities 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 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 Securities and the Guarantee and the distribution of this Offering Circular, see "*Subscription and Sale.*"

The Securities are expected to be rated "Aa2" by Moody's Investors Service, Inc. ("Moody's"). Such rating of the Securities does not constitute a recommendation to buy, sell or hold the Securities and may be subject to revision or withdrawal at any time by such rating organization. Such rating should be evaluated independently of any other rating of the Securities, the Issuer's or Guarantor's other securities or the Issuer or Guarantor.

The Securities 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 October 25, 2018, 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 Securities will not be issued in exchange for interests in the Global Certificate.

Joint Lead Managers and Bookrunners

HSBC **Société Générale Corporate & Investment Banking** **Standard Chartered Bank**

Co-Manager

KEXIM Bank (UK) Limited

The date of this Offering Circular is October 18, 2018.

TABLE OF CONTENTS

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 Securities. 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 Securities 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 Securities and the Guarantee, including the merits and risks involved. Neither the Issuer nor the Guarantor is making any representation to any purchaser of the Securities regarding the legality of an investment in the Securities 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 Securities. 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 Securities.

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 or any of their 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 or any of their affiliates or advisers. The Managers assume no 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 Securities, the issue of the Guarantee or the future performance of the Securities or the Guarantee. To the fullest extent permitted by law, none of the Managers accepts any responsibility for the contents of this Offering Circular or for any other statement, made or purported to be made by any Manager or on its behalf in connection with the Issuer, the Guarantor, the Guarantee or the issue and offering of the Securities. The Managers accordingly disclaim all and any liability whether arising in tort or contract or otherwise (save as referred to above) which it might otherwise have in respect of this Offering Circular or any such statement. Each person receiving this Offering Circular acknowledges that such person has not relied on the Managers or any of their 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 Securities. None of the Issuer, the Guarantor and the Managers is making an offer to sell the Securities 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 Securities 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 Securities 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 Securities 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 Securities. 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 Securities 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 Securities will be deemed to have made acknowledgements, representations, warranties and agreements intended to restrict the resale or other transfer of the Securities, 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.

PRIIPs REGULATION / PROHIBITION OF SALES TO EEA RETAIL INVESTORS — The Securities are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("EEA"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "MiFID II") or (ii) a customer within the meaning of Directive 2002/92/EC (as amended, the "Insurance Mediation Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently no key information document required by Regulation (EU) No 1286/2014 (the "PRIIPs Regulation") for offering or selling the Securities or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Securities or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPS Regulation.

MIFID II PRODUCT GOVERNANCE / PROFESSIONAL INVESTORS AND ECPS ONLY TARGET MARKET

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

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 Securities 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).

ENFORCEABILITY OF CIVIL LIABILITIES

The Issuer is a public limited liability company, organized and existing under the laws of Luxembourg. A substantial portion of the assets of the Issuer is located outside of the United States and neither its officers nor its directors are resident in the United States.

The Guarantor is a statutory juridical entity established under The Export-Import Bank of Korea Act of 1969, as amended, in 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.

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 and the United Kingdom, 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.

Although there is no treaty between Luxembourg and the United States with respect to the reciprocal enforcement of judgments, a valid, final and conclusive judgment against the Issuer obtained from a state or federal court of the United States, which judgment remains in full force and effect, would be recognized and enforced by a Luxembourg court in accordance with Luxembourg case law, without reconsideration of the merits, subject to the following conditions: (a) the judgment of the foreign court must be enforceable (*exécutoire*) in the country in which it was rendered; (b) the foreign court must have had jurisdiction according to the Luxembourg conflict of jurisdiction rules; (c) the foreign court must have applied to the matter submitted to it the proper law designated by the Luxembourg conflict of laws rules (although some first instance decisions rendered in Luxembourg (which have not been confirmed by the Court of Appeal) no longer apply this condition); (d) the judgment of the foreign court must not have been obtained by fraud, but in compliance with procedural rules of the country in which it was rendered, in particular with the rights of the defendant; and (e) the judgment of the foreign court must not be contrary to Luxembourg international public policy.

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 Securities and the Fiscal Agency Agreement, the Fiscal Agent also will make available for inspection by holders of the Securities 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 Securities*."

PRESENTATION OF FINANCIAL INFORMATION

The Issuer's separate and consolidated financial statements as of and for the years ended December 31, 2016 and 2017 included in this Offering Circular have been prepared in accordance with International Financial Reporting Standards as adopted in the European Union.

The Guarantor's separate financial statements and information as of and for the years ended December 31, 2016 and 2017 and as of December 31, 2017 and June 30, 2018 and for the six months ended June 30, 2017 and 2018 included in this Offering Circular have been prepared in accordance with International Financial Reporting Standards as adopted in Korea ("Korean IFRS" or "K-IFRS"). References in this Offering Circular to "separate" financial statements and information are to financial statements and information prepared on a non-consolidated 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

In this Offering Circular, all references to the "Issuer" are to Doosan Power Systems S.A. and, unless otherwise specified or the context otherwise requires, its consolidated subsidiaries. In addition, unless otherwise specified or the context otherwise requires:

- references to "Doosan Babcock" are to Doosan Babcock Ltd. and its consolidated subsidiaries, other than Doosan Lentjes;
- references to "Doosan Škoda Power" are to Doosan Škoda Power s.r.o and its consolidated subsidiaries; and
- references to "Doosan Lentjes" are to Doosan Lentjes GmbH and its consolidated subsidiaries.

All references to the "Doosan Group" are to a group of companies affiliated with Doosan Corporation, the holding company of the Doosan Group. The Doosan Group is not a legal entity but a reference to a group of such affiliated companies for the purposes of the Monopoly Regulation and Fair Trade Act of Korea.

All references to the "Bank" or the "Guarantor" are to The Export-Import Bank of Korea. All references to "Korea" or the "Republic" are to the Republic of Korea. All references to the "Government" are to the government of Korea. All references to "Luxembourg" are to the Grand Duchy of Luxembourg. All references to the "UK" are to the United Kingdom.

All references to "MW" are to megawatt and all references to "MWe" are to megawatt electrical.

Unless otherwise indicated, all references to "won", "Won" or "₩" contained in this Offering Circular are to the currency of Korea, references to "U.S. dollar", "Dollar", "USD", "$" or "US$" are to the currency of the United States of America, references to "Canadian Dollar" or "CAD" are to the currency of Canada, references to "Euro", "EUR" or "€" are to the currency introduced at the start of the third stage of the European economic and monetary union pursuant to the Treaty establishing the European Community (signed in Rome on March 25, 1957), as amended, references to "Japanese Yen" or "JPY" are to the currency of Japan, references to "Chinese Renminbi" or "CNY" are to the currency of the People's Republic of China, references to "Swiss franc" or "CHF" are to the currency of Switzerland, references to "pound sterling" or "GBP" are to the currency of the United Kingdom, references to "Hong Kong dollar" or "HKD" are to the currency of Hong Kong, S.A.R., references to "Singapore dollar" or "SGD" are to the currency of Singapore, references to "Turkish Lira" or "TRY" are to the currency of Turkey, references to "Malaysia Ringgit" or "MYR" are to the currency of Malaysia, references to "Brazilian Real" or "BRL" are to the currency of Federative Republic of Brazil, references to "Mexican Peso" or "MXN" are to the currency of the United Mexican States, references to "New Zealand Dollar" or "NZD" are to the currency of New Zealand, references to "Thai Baht" or "THB" are to the currency of Thailand, references to “Australian dollar” or “AUD” are to the currency of Australia, references to “Indian Rupee” or “INR” are to the currency of India, references to “Indonesian Rupiah” or “IDR” are to the currency of Indonesia, references to “Saudi Riyal” or “SAR” are to the currency of Saudi Arabia, references to “Swedish Krona” or “SEK” are to the currency of Sweden, references to “South African Rand” or “ZAR” are to the currency of South Africa, references to “Norwegian Krone” or “NOK” are to the currency of Norway, references to “Czech Koruna” or “CZK” are to the currency of the Czech Republic and references to “Peruvian nuevo sol” or “PEN” are to the currency of Peru.

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:

- increased sovereign default risk in select countries and the resulting adverse effects on the global financial markets;
- adverse conditions or uncertainty in the economies of countries and regions that are important export markets for Korea, such as the United States, Europe, Japan and China, or in emerging market economies in Asia or elsewhere, as well as increased uncertainty from the United Kingdom’s impending exit from the European Union in March 2019;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the U.S. dollar, the Euro or Japanese Yen exchange rates or revaluation of the Chinese Renminbi), interest rates, inflation rates or stock markets;
- declines in consumer confidence and a slowdown in consumer spending;
- increasing levels of household debt;
- increasing delinquencies and credit defaults by consumer and small- and medium-sized enterprise borrowers;
- decreases in the market prices of Korean real estate;
- the continued growth 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 Korea to China), as well as a slowdown in the growth of China's economy, which is Korea's most important export market;

- the investigations of large Korean conglomerates and their senior management for bribery, embezzlement and other possible misconduct;
- the economic impact of any pending or future free trade agreements;
- 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 or corporate governance issues at certain Korean companies;
- increases in social expenditures to support an aging population in Korea or decreases in economic productivity due to the declining population size in Korea;
- geo-political uncertainty and risk of further attacks by terrorist groups around the world;
- the occurrence of severe health epidemics in Korea or other parts of the world, including an outbreak of severe acute respiratory syndrome, swine or avian flu, Ebola or Middle East Respiratory Syndrome ("MERS").
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the controversy between Korea and China regarding the decision to allow the United States to deploy the Terminal High Altitude Area Defense system in Korea);
- political uncertainty or increasing strife among or within political parties in Korea;
- natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;
- hostilities or political or social tensions involving oil producing countries in the Middle East or North Africa and any material disruption in the supply of oil or sudden increase in the price of oil; and
- an increase in the level of tensions or an outbreak of hostilities between North Korea and Korea 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 Securities, see "Terms and Conditions of the Securities" 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	Doosan Power Systems S.A., a public limited liability company (*société anonyme*), organized and existing under the laws of Luxembourg, with its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, and registered with Luxembourg trade and companies register under number B 125.754. The Issuer's Legal Entity Identifier is 5493002324XYX4878951.
Securities	US$300,000,000 Guaranteed Senior Capital Securities
Issue Price	99.677%
Issue Date	October 25, 2018
Form and Denomination	The Securities 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 Securities	The Securities constitute unconditional, unsecured and unsubordinated obligations of the Issuer and will at all times rank *pari passu* without any preference among themselves and *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer, except as may be required by mandatory provisions of law.
Guarantor	The Export-Import Bank of Korea, a statutory juridical entity established under The Export-Import Bank of Korea Act of 1969, as amended, in Korea.
Guarantee	The Guarantor has given for the benefit of the Holders of the Securities 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 Securities as and when the same shall become due according to the Conditions. The Guarantee relating to the Securities 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 earlier of (i) the payment of all sums payable in respect of the relevant Securities having been paid in full and (ii) the First Call Date.

Interest	Each Security will entitle the Holder thereof to receive cumulative interest. The Interest on the Securities will accrue: (a) from (and including) the Issue Date to (but excluding) October 25, 2021 (the "First Call Date") at 3.750% per annum; and (b) (A) from (and including) the First Call Date to (but excluding) the immediately following Reset Date and (B) thereafter from (and including) each Reset Date to (but excluding) the next following Reset Date, at a fixed rate equivalent to the prevailing 3-year Treasury Rate plus the Initial Credit Spread plus the Step Up Margin, in each case on the Principal Amount of each Security, which interest will be payable semi-annually in arrear in U.S. dollars on April 25 and October 25 of each year (each an "Interest Payment Date").
Optional Deferral of Interest	The Issuer may determine in its sole discretion (not less than five Business Days prior to the relevant Interest Payment Date) not to pay all or part of the Interest Amount falling due on that Interest Payment Date. If the Issuer determines not to pay all or part of the Interest Amount falling due on an Interest Payment Date, such interest (or part thereof, as the case may be) will not be due and payable, or be paid, until the relevant Payment Reference Date and for so long as the same remains unpaid will constitute "Deferred Interest." Additional interest will accrue on Deferred Interest as set out in Condition 5.3(a) and will be added to such Deferred Interest (and thereafter accumulate additional interest accordingly) on each Interest Payment Date. Deferred Interest, including any additional interest thereon, will be payable in accordance with Condition 5.5. The Issuer is not subject to any limits as to the number of times the Interest Amount and Deferred Interest can be deferred, except as specified in Condition 5.5.

Restrictions in the Case of Deferral	If (a) some or all of an Interest Amount is deferred pursuant to Condition 5.3(a); and (b) such Interest Amount has not been paid in full by the date which is 20 Business Days following the Interest Payment Date on which it would otherwise have been due, each of the Issuer and Doosan Heavy Industries & Construction Co., Ltd. ("Doosan Heavy") will not: (i) declare or pay any discretionary dividends or distributions or make any other discretionary payment, and will procure that no discretionary dividend, distribution or other discretionary payment is made, on any of its Discretionary Obligations; or (ii) redeem, reduce, cancel, buy-back or acquire for any consideration, on a discretionary basis, any of its Discretionary Obligations; (other than in respect of employee benefit plans or similar arrangements with or for the benefit of employees, officers, directors or consultants of the Issuer or Doosan Heavy, as the case may be) until the date on which all Deferred Interest has been paid in full.
Payment of Deferred Interest	The Issuer may elect to pay any Deferred Interest at any time on the giving of at least five and not more than 15 Business Days' prior notice to the Agents. The Issuer must pay such Deferred Interest on the earliest to occur of: (i) the date on which any discretionary dividend, distribution or other discretionary payment is declared or paid on, or any discretionary redemption, reduction, cancellation, buy-back or acquisition is made of, any Discretionary Obligation of the Issuer (other than in respect of employee benefit plans or similar arrangements with or for the benefit of employees, officers, directors or consultants of the Issuer); (ii) the date on which all of the Securities are redeemed pursuant to the provisions of Condition 6; and (iii) the date on which an order is made or a resolution is passed for the Winding-Up of the Issuer.
Maturity Date	Unless redeemed or purchased and cancelled earlier in accordance with the Conditions, the Securities may be

	redeemed at the option of the Issuer on October 25, 2048 at their Principal Amount plus any Interest Amount accrued up to (but excluding) such date and any outstanding Deferred Interest and, if not redeemed on such date, at each Issuer Redemption Date; provided that, if the Securities are not redeemed at the option of the Issuer on an Issuer Redemption Date, the Securities will automatically be extended for 30 years from such Issuer Redemption Date.
Redemption at the Option of the Issuer	Subject to applicable laws, the Issuer may redeem the Securities (in whole but not in part) on the First Call Date or on any Interest Payment Date thereafter at their Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest, on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders, the Agents and the Guarantor.
Redemption due to a Gross-Up Event	The Issuer may, subject to applicable laws, redeem the Securities (in whole but not in part) at any time at their Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders and the Agents, if, as a result of any change in, or amendment to, the laws (or any rules or regulations thereunder) of a Relevant Jurisdiction, or any change in or amendment to any official interpretation or application of those laws, rules or regulations, which change or amendment becomes effective on or after October 18, 2018, the Issuer pays or will become obliged to pay an Additional Amount under Condition 8.
Redemption due to a Tax Event or an Accounting Event	If a Tax Event or an Accounting Event occurs, the Issuer may, subject to applicable laws, redeem the Securities (in whole but not in part) at any time at the Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders and the Agents. Prior to giving such notice of redemption, the Issuer will deliver or procure that there is delivered to the Fiscal Agent a certificate signed by an Authorized Signatory of the Issuer stating that a Tax Event or an Accounting Event (as the case may be) has occurred and stating in the case of a Tax Event that the relevant loss of deduction cannot be avoided by the Issuer taking reasonable measures available to it and, in the case of a Tax Event, the opinion referred to in Condition 6.4(b) and,

	in the case of an Accounting Event, the opinion referred to in Condition 6.4(c).
Bankruptcy Put Right	If a Bankruptcy Event occurs at any time from the Issue Date to 30 days prior to the First Call Date, to the extent permitted by applicable law, each Holder will have the right (the "Bankruptcy Put Right") to require the Guarantor to purchase on the Bankruptcy Put Date the Securities held by such Holder (in whole but not in part) at their Principal Amount plus any interest accrued up to (but excluding) the Bankruptcy Put Date and any outstanding Deferred Interest. If a Bankruptcy Event giving rise to such right has occurred during such period, it shall be deemed that the Bankruptcy Put Right has been irrevocably exercised by all Holders without the delivery of any written notice by the Holders of their intention to exercise the Bankruptcy Put Right.
Non-Call Put Right	If the Issuer elects not to redeem the Securities on the First Call Date as provided for in Condition 6.2, to the extent permitted by law, each Holder will be deemed to have exercised its right to require the Guarantor to purchase on the First Call Date (such date, the "Non-Call Put Date") all of the Securities held by such Holder at their Principal Amount plus any interest accrued up to (but excluding) the Non-Call Put Date and any outstanding Deferred Interest.
Governing Law	The Securities and the Guarantee are governed by, and will be construed in accordance with, the laws of the State of New York.
Rating	The Securities are expected to be rated "Aa2" by Moody's. A rating is not a recommendation to buy, sell or hold the Securities and may be subject to revision or withdrawal at any time by the assigning rating organization.
Fiscal Agent	Citicorp International Limited
Paying Agent, Transfer Agent and Calculation Agent	Citibank, N.A., London Branch
Registrar	Citigroup Global Markets Europe AG
Register	The Registrar shall maintain a register (the "Register") in respect of the Securities
Listing	Approval in-principle has been received from the SGX-ST for the listing and quotation of the Securities on the SGX-ST. There can be no assurance, however, that the Securities will be admitted for listing and quotation on the SGX-ST. For as long as the Securities are listed on the SGX-ST and the rules of the SGX-ST so require, the

	Securities, 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 Securities, if traded on the SGX-ST, will be traded in a minimum board lot size of US$200,000. So long as the Securities 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, 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.
Use of Proceeds	The Issuer expects to use the net proceeds from this offering for the repayment of certain existing debt and other general corporate purposes. See "*Use of Proceeds*."
Clearance and Settlement	The Securities have been accepted for clearance by Euroclear and Clearstream under the following codes: ISIN: XS1892700979 Common Code: 189270097

RISK FACTORS

Investing in the Securities involves risks and uncertainties. Prospective purchasers of the Securities 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 Securities. The risks described below are not the only ones that may be relevant to the Securities.

Risks Relating to the Securities

The Securities may not be a suitable investment for all investors.

Each potential investor in the Securities must determine the suitability of that investment in light of its own circumstances. In particular, each potential investor should:

- have sufficient knowledge and experience to make a meaningful evaluation of the Securities, the merits and risks of investing in the Securities and the information contained in this Offering Circular or any applicable supplement;

- have access to, and knowledge of, appropriate analytical tools to evaluate, in the context of its particular financial situation, an investment in the Securities and the impact the Securities will have on its overall investment portfolio;

- have sufficient financial resources and liquidity to bear all of the risks of an investment in the Securities, including where the currency for principal or interest payments is denominated in a currency different from that of the potential investor;

- understand thoroughly the terms of the Securities and be familiar with the behavior of any relevant financial markets; and

- be able to evaluate (either alone or with the help of a financial adviser) possible scenarios for economic, interest rate and other factors that may affect its investment and its ability to bear the applicable risks.

The Securities are complex investment securities. Sophisticated institutional investors generally do not purchase complex investment securities as stand-alone investments. They purchase complex investment securities as a way to reduce risk or enhance yield with an understood, measured, appropriate addition of risk to their overall portfolios. A potential investor should not invest in the Securities unless it has the expertise (either alone or with a financial adviser) to evaluate how the Securities will perform under changing conditions, the resulting effects on the value of the Securities and the impact this investment will have on the potential investor's overall investment portfolio.

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, such as requiring the Guarantor to obtain prior approval from the Ministry of Economy and Finance on or suspend the remittance of payments out of Korea, 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 is required to but 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 Issuer has the right to defer Interest Amounts on the Securities.

The Issuer may in its sole discretion defer Interest Amounts (as defined in "*Terms and Conditions of the Securities*"), in whole or in part, by delivering the relevant deferral notices to Holders. The Issuer is not subject to any limits as to the number of times the Interest Amounts and Deferred Interest (as defined in "*Terms and Conditions of the Securities*") can be deferred. Deferred Interest may, at the option of the Issuer, be paid at any time, and the circumstances in which it is required to be paid are set out in Condition 5.5 of the Securities.

Any deferral of Interest Amounts is likely to have an adverse effect on the market price of the Securities. In addition, as a result of the deferral provisions of the Securities, the market price of the Securities may be more volatile than the market prices of other securities on which interest or distributions accrue that are not subject to such deferrals and may be more sensitive generally to adverse changes in the Issuer's or the Guarantor's financial condition or results of operations.

The Securities may be redeemed or purchased under certain circumstances.

Holders should be aware that the Securities may be redeemed at the option of the Issuer (in whole but not in part) at their principal amount (plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest) on the First Call Date or on any Interest Payment Date thereafter (each capitalized term as defined in "*Terms and Conditions of the Securities*"), by delivering the relevant redemption notices to Holders. In addition, if the Issuer elects not to redeem the Securities on the First Call Date, the Securities will be purchased by the Guarantor on such date at their principal amount (plus any interest accrued up to (but excluding) such date and any outstanding Deferred Interest).

The Securities are also subject to redemption (in whole but not in part) at the Issuer's option at any time at their principal amount (plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest) upon the occurrence of a Gross-Up Event, a Tax Event or an Accounting Event (each as defined in "*Terms and Conditions of the Securities*"). The relevant redemption amount or purchase price may be less than the then current market value of the Securities.

The date on which the Securities are redeemed or purchased may not accord with the preference of individual Holders. This may be disadvantageous to Holders in light of market conditions or the individual circumstances of the Holders. In addition, an investor may not be able to reinvest the redemption or sale proceeds in comparable securities at an effective interest rate at the same level as that of the Securities.

There is no limitation on issuing pari passu securities.

There is no restriction on the amount of securities, guarantees or other liabilities which the Issuer or the Guarantor may issue or incur and which rank *pari passu* with the Securities and the Guarantee, respectively. The issue of any such securities or the incurrence of any such other liabilities by the Issuer may increase the likelihood of a deferral of interest under the Securities. Furthermore, the terms of such securities, guarantees or other liabilities may include provisions resulting in the Issuer being required to defer interest under the Securities in circumstances where a deferral of interest is made on such other securities, guarantees or liabilities. The issue of any such securities or the incurrence of any such other liabilities might also have an adverse impact on the trading price of the Securities and/or the ability of Holders to sell their Securities.

The bankruptcy laws of Luxembourg and other local bankruptcy laws may differ from those of another jurisdiction with which Holders are familiar.

If a Bankruptcy Event (as defined in "*Terms and Conditions of the Securities*") occurs with respect to the Issuer at any time between the issue date of the Securities to 30 days prior to the First Call Date, the Securities will be purchased by the Guarantor at their principal amount (plus any interest accrued up to (but excluding) such date and any outstanding Deferred Interest). Because the Issuer is incorporated under the laws of Luxembourg, any bankruptcy proceeding relating to the Issuer would involve Luxembourg bankruptcy laws, the procedural and substantive provisions of which may differ from comparable provisions of the local bankruptcy laws of jurisdictions with which Holders are familiar.

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

The Securities are expected to be rated "Aa2" by Moody's. The rating assigned to the Securities will have been based primarily on the Guarantee to be issued by the Guarantor with respect to the Securities. 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 Securities 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 Securities.

A rating is not a recommendation to buy, sell or hold the Securities 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 Securities may adversely affect the market price of the Securities or a Holder's ability to dispose of the Securities.

The liquidity and price of the Securities may be volatile.

The price and trading volume of the Securities 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 Securities to fluctuate. Any such developments may result in large and sudden adverse changes in the trading volume and price of the Securities. There is no assurance that these developments will not occur in the future.

An active trading market for the Securities may not develop.

The Securities 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 of the Securities on the SGX-ST or that an active trading market for the Securities will develop or as to the liquidity or sustainability of any such market, the ability of Holders to sell their Securities or the price at which Holders will be able to sell their Securities. The Managers are not obliged to make a market in the Securities and any such market making, if commenced, may be discontinued at any time at the sole discretion of the Managers.

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

The Conditions of the Securities 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 Securities 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 Securities or any of the provisions of the Fiscal Agency Agreement, provided that it is not, in the opinion of the Fiscal Agent, materially prejudicial to the interests of the Holders, or may agree, among other things, to make any modifications to the Securities 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 or a Relevant Jurisdiction (as defined in "*Terms and Conditions of the Securities*") so long as such modification does not adversely affect the rights of any Holder in any material respect.

The Securities will be evidenced by a Global Certificate and holders of a beneficial interest in the Global Certificate must rely on the procedures of the relevant Clearing System.

Securities issued will be evidenced 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. Upon deposit of a Global Certificate with the relevant Clearing System, such Clearing System will credit each person shown in its records that has purchased Securities for its own account or for the account of one or more beneficial owners, with a principal amount of Securities equal to the principal amount such Holder has purchased for its own account or for the account of one or more beneficial owners and paid for. While the Securities are evidenced by the Global Certificate, Holders will be able to trade their beneficial interests only through the Clearing Systems.

While the Securities are evidenced by the Global Certificate, the Issuer (or failing which, the Guarantor under the Guarantee) will discharge its payment obligations under the Securities 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 to receive payments under the relevant Securities. 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 Securities. Instead, such holders will be permitted to act only to the extent that they are enabled by the relevant Clearing System to appoint appropriate proxies.

TERMS AND CONDITIONS OF THE SECURITIES

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

The US$300,000,000 Guaranteed Senior Capital Securities (the "**Securities**," which expression, unless the context otherwise requires, includes any further Securities issued pursuant to Condition 10 and forming a single series with the Securities) of Doosan Power Systems S.A. (the "**Issuer**") are issued under a fiscal agency agreement dated October 25, 2018 (as amended from time to time, the "**Fiscal Agency Agreement**"), among the Issuer, Doosan Heavy Industries & Construction Co., Ltd. ("**Doosan Heavy**"), The Export-Import Bank of Korea as the guarantor (the "**Guarantor**"), Citicorp International Limited as fiscal agent (the "**Fiscal Agent**," which expression shall include its successor(s)), Citibank, N.A., London Branch as 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 calculation agent (the "**Calculation Agent**," which expression shall include its successor(s)), and Citigroup Global Markets Europe AG as 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, the Calculation Agent and the Registrar, and any reference to an "**Agent**" is to any one of them. The Securities 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 Securities 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 Securities. 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**"). The Securities will initially be evidenced by one or more certificates in global form (each, a "**Global Certificate**"). No Definitive Certificates will be issued to Holders except upon the circumstances set forth in the Fiscal Agency Agreement. The Securities will be issued at the Issue Price.

1.2 Title

Title to the Securities passes only by registration in the Register and in accordance with the provisions of the Fiscal Agency Agreement. The holder of any Security 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 Security) "**holder**" means the person in whose name a Security is registered in the Register (or, in the case of a joint holding, the first named thereof).

The Issuer shall maintain a register of holders of the Securities at its registered office in accordance with the provisions of the Luxembourg law of August 10, 1915 on commercial companies, as amended, which shall match the Register with regard to the entries therein. In the event of any discrepancies between the Register and the register held by the Issuer at its registered office, the register held by the Issuer at its registered office shall prevail for Luxembourg law purposes.

The Fiscal Agency Agreement contains provisions which oblige the Registrar to promptly provide an updated copy of the Register to the Issuer on the issue date of the Securities and at any time following any amendment to the Register, in order to allow the Issuer to update the register held by it at its registered office to reflect the Register.

2. TRANSFERS OF SECURITIES AND ISSUE OF DEFINITIVE CERTIFICATES

2.1 Transfers

Subject as provided in Condition 2.4, a Security may be transferred by depositing the Definitive Certificate issued in respect of that Security, 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 Security 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 Securities that are the subject of the transfer and the authority of the individuals who have executed the form of transfer. Legal title to the Securities will pass upon registration of such transfer in the Register.

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

2.2 Delivery of new Definitive Certificates

Each new Definitive Certificate to be issued upon transfer of Securities 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 Security to the address specified in the form of transfer. For the purposes of this Condition, "**business day**" shall mean a day on which banks are open for business in the city where the Agents have their specified offices.

Where some but not all of the Securities in respect of which a Definitive Certificate is issued are to be transferred, a new Definitive Certificate in respect of the Principal Amount of Securities 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 Securities 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 Securities 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 Security to be registered during the period of 15 days ending on the due date for any payment of any principal or interest (including Deferred Interest) on that Security.

3. STATUS AND NEGATIVE PLEDGE

3.1 Status of the Securities

The Securities constitute unconditional, unsecured and unsubordinated obligations of the Issuer and will at all times rank *pari passu* without any preference among themselves and *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer, except as may be required by mandatory provisions of law.

3.2 Negative pledge

So long as there are any Outstanding Securities (as defined in the Fiscal Agency Agreement), the Guarantor will not create or permit to subsist any mortgage, charge, pledge or other security interest upon or over the whole or any part of its property, assets or revenues (whether present or future) to secure for the benefit of the holders of any International Investment Securities (as defined below):

(i) payment of any sum due in respect of any such International Investment Securities;

(ii) payment under any guarantee in respect of any such International Investment Securities; or

(iii) payment under any indemnity or other like obligation in respect of any such International Investment Securities,

without, in any such case and at the same time, according to the Securities either the same security as is available for the benefit of the holders of such International Investment Securities or such other security as shall be approved for the purpose by a resolution of the Holders as a Special Matter (as defined in the Fiscal Agency Agreement).

"**International Investment Securities**" means notes, bonds, debentures, certificates of deposit or investment securities of any person which (i) by their terms either are payable, or confer a right to receive payment, in any currency other than Korean won or are denominated in Korean won and more than one-half of the aggregate principal amount of which is initially distributed outside Korea by or with the authorization of the Guarantor and (ii) are for the time being, or are intended to be, quoted, listed, ordinarily dealt in or traded on any stock exchange or over-the-counter or other securities market outside Korea.

3.3 No set-off

To the extent and in the manner permitted by applicable law, no Holder may exercise, claim or plead any right of set-off, counterclaim, compensation or retention in respect of any amount owed to it by the Issuer in respect of, and arising from, the Securities and each Holder will, by virtue of its holding of any Security, be deemed to have waived all such rights of set-off, counterclaim, compensation or retention.

3.4 No voting right

The Securities do not confer any voting rights on Holders with respect to the Issuer's Common Shares or any other class of share capital of the Issuer.

4. GUARANTEE

Pursuant to the guarantee set out in Section 3 of the Fiscal Agency Agreement as evidenced by the notation of guarantee dated October 25, 2018 (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 Securities as and when the same shall become due according to these Conditions. For the avoidance of doubt, any Deferred Interest (including any additional interest accrued thereon in accordance with Condition 5.3(a)) will not be deemed due until it becomes due and payable in accordance with Condition 5.5(b). The Guarantee relating to the Securities 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 earlier of (i) the payment of all sums payable in respect of the relevant Securities having been paid in full and (ii) the First Call Date.

5. INTEREST

5.1 Interest

Each Security shall entitle the Holder thereof to receive cumulative interest in accordance with the provisions of this Condition 5.

5.2 Interest Rate

Interest on the Securities will accrue:

(a) from (and including) the Issue Date to (but excluding) October 25, 2021 (the "**First Call Date**") at 3.750% per annum; and

(b) (A) from (and including) the First Call Date to (but excluding) the immediately following Reset Date and (B) thereafter from (and including) each Reset Date to (but excluding) the next following Reset Date, at a fixed rate equivalent to the prevailing 3-year Treasury Rate (as defined below) plus the Initial Credit Spread (as defined below) plus the Step Up Margin (as defined below) (such rate, the "**Reset Rate**"),

(each an "**Interest Rate**") in each case on the Principal Amount of each Security, which interest will be payable semi-annually in arrear in U.S. dollars on April 25 and October 25 of each year (each an "**Interest Payment Date**").

The Interest Amount payable on any Interest Payment Date shall be calculated on the basis of a 360-day year consisting of twelve 30-day months.

5.3 Optional deferral of interest

(a) The Issuer may determine in its sole discretion (not less than five Business Days prior to the relevant Interest Payment Date) not to pay all or part of the Interest Amount falling due on that Interest Payment Date. If the Issuer determines not to pay all or part of the Interest Amount falling due on an Interest Payment Date, such interest (or part thereof, as the case may be) will not be due and payable, or be paid, until the relevant Payment Reference Date and for so long as the same remains unpaid will constitute "**Deferred Interest**". Additional interest will accrue on such Deferred Interest:

  (i) at the same Interest Rate as the Principal Amount of the Securities bears from time to time; and

  (ii) from (and including) the date on which (but for such deferral) the Deferred Interest would otherwise have been due to (but excluding) the date the Deferred Interest is paid, and will be added to such Deferred Interest (and thereafter accumulate additional interest accordingly) on each Interest Payment Date. Deferred Interest, including any additional interest accrued thereon, will be payable in accordance with Condition 5.5.

(b) The Issuer will notify the Holders, the Guarantor, the Agents and (if and for so long as the Securities are listed on the SGX-ST and the rules of the SGX-ST so require) the SGX-ST of any determination by it not to pay all or part of the Interest Amount which would otherwise fall due on an Interest Payment Date, not less than five Business Days prior to the relevant Interest Payment Date. Deferral of Interest Amounts pursuant to this Condition will not constitute a default of the Issuer or a breach of its obligations under the Securities or for any other purpose.

(c) The Issuer is not subject to any limits as to the number of times the Interest Amount and Deferred Interest can be deferred, except as specified in Condition 5.5.

5.4 **Restrictions in the case of deferral**

If:

(a) some or all of an Interest Amount is deferred pursuant to Condition 5.3(a); and

(b) such Interest Amount has not been paid in full by the date which is 20 Business Days following the Interest Payment Date on which it would otherwise have been due,

each of the Issuer and Doosan Heavy will not:

(i) declare or pay any discretionary dividends or distributions or make any other discretionary payment, and will procure that no discretionary dividend, distribution or other discretionary payment is made, on any of its Discretionary Obligations; or

(ii) redeem, reduce, cancel, buy-back or acquire for any consideration, on a discretionary basis, any of its Discretionary Obligations,

(other than in respect of employee benefit plans or similar arrangements with or for the benefit of employees, officers, directors or consultants of the Issuer or Doosan Heavy, as the case may be) until the date on which all Deferred Interest has been paid in full. For the avoidance of doubt, nothing in this Condition shall restrict the ability of any Subsidiary of the Issuer or Doosan Heavy (other than the Issuer) to declare and pay dividends, advance loans or otherwise make payments to the Issuer or Doosan Heavy, as the case may be.

5.5 **Payment of Deferred Interest**

(a) The Issuer may elect to pay any Deferred Interest at any time on the giving of at least five and not more than 15 Business Days' prior notice to the Agents.

(b) The Issuer must pay such Deferred Interest on the earliest to occur of:

(i) the date on which any discretionary dividend, distribution or other discretionary payment is declared or paid on, or any discretionary redemption, reduction, cancellation, buy-back or acquisition is made of, any Discretionary Obligation of the Issuer (other than in respect of employee benefit plans or similar arrangements with or for the benefit of employees, officers, directors or consultants of the Issuer);

(ii) the date on which all of the Securities are redeemed pursuant to the provisions of Condition 6; and

(iii) the date on which an order is made or a resolution is passed for the Winding-Up of the Issuer.

(c) Any partial payment of outstanding Deferred Interest (including any additional interest accrued thereon) by the Issuer shall be shared by the holders of all outstanding Securities on a pro rata basis.

5.6 **Accrual**

Interest will cease to accrue on each Security from and including its due date for redemption unless, upon due presentation, payment of the principal in respect of the Security is improperly withheld or refused or unless default is otherwise made in respect of payment, in which event interest shall continue to accrue.

5.7 **Determination and publication of Reset Rates**

The Reset Rate for each Reset Period will be determined by the Calculation Agent on the relevant Reset Determination Date and promptly notified by the Calculation Agent to the Issuer, the Guarantor and the other Agents and, if required by the rules of any stock exchange on which the Securities are listed from time to time, to such stock exchange, and to the Holders, without undue delay but, in any case, not later than the relevant Reset Date.

5.8 **Notifications, etc. to be final**

All notifications, opinions, determinations, certificates, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of these Conditions, whether by the Reference Treasury Dealers (or any of them) or the Calculation Agent, will (in the absence of manifest error, negligence or willful default) be binding upon the Issuer, the Agents and all Holders and (in the absence of negligence or willful default) no liability to the Issuer or the Holders will attach to the Reference Treasury Dealers (or any of them) or the Calculation Agent in connection with the exercise or non-exercise by any of them of their powers, duties and discretions pursuant to such provisions.

6. REDEMPTION, PURCHASE AND PUT

6.1 **Maturity**

Unless redeemed or purchased and cancelled earlier in accordance with these Conditions, the Securities may be redeemed at the option of the Issuer on October 25, 2048 at their Principal Amount plus any Interest Amount accrued up to (but excluding) such date and any outstanding Deferred Interest and, if not redeemed on such date, at the end of each subsequent 30-year period (each of such dates, an "**Issuer Redemption Date**"); provided that, if the Securities are not redeemed at the option of the Issuer on an Issuer Redemption Date, the maturity date of the Securities will automatically be extended for 30 years from such Issuer Redemption Date.

6.2 **Redemption at the option of the Issuer**

Subject to applicable laws, the Issuer may redeem the Securities (in whole but not in part) on the First Call Date or on any Interest Payment Date thereafter at their Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest, on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders, the Agents and the Guarantor.

6.3 **Redemption due to a Gross-Up Event**

(a) If a Gross-Up Event occurs, the Issuer may, subject to applicable laws, redeem the Securities (in whole but not in part) at any time at their Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest, on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders and the Agents.

(b) In such event:

(i) no such notice of redemption may be given earlier than 90 calendar days prior to the earliest calendar day on which the Issuer would for the first time be obliged to pay the Additional Amounts in question on payments due in respect of the Securities; and

(ii) prior to the giving of any such notice of redemption, the Issuer will deliver or procure that there is delivered to the Fiscal Agent:

(A) a certificate signed by an Authorized Signatory of the Issuer stating that the Issuer is entitled to effect such redemption and setting out a statement of facts showing that the conditions to the exercise of the right of the Issuer to redeem have been satisfied and that the obligation to pay Additional Amounts cannot be avoided by the Issuer taking reasonable measures available to it; and

(B) an opinion of an independent legal or tax adviser of recognized standing to the effect that the Issuer has or will become obliged to pay the Additional Amounts in question as a result of a Gross-Up Event,

and the Fiscal Agent shall be entitled, without liability to any person, to accept the above certificate and opinion as sufficient evidence of the satisfaction of the conditions precedent set out above, in which event it shall be conclusive and binding on the Holders.

(c) "**Gross-Up Event**" means that as a result of any change in, or amendment to, the laws (or any rules or regulations thereunder) of a Relevant Jurisdiction, or any change in or amendment to any official interpretation or application of those laws, rules or regulations, which change or amendment becomes effective on or after October 18, 2018 the Issuer pays or will become obliged to pay an Additional Amount under Condition 8 in respect of the Securities.

6.4 **Redemption due to a Tax Event or an Accounting Event**

(a) If a Tax Event or an Accounting Event occurs, the Issuer may, subject to applicable laws, redeem the Securities (in whole but not in part) at any time at the Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders and the Agents. Prior to giving such notice of redemption, the Issuer will deliver or procure that there is delivered to the Fiscal Agent a certificate signed by an Authorized Signatory of the Issuer stating that a Tax Event or an Accounting Event (as the case may be) has occurred and stating in the case of a Tax Event that the relevant loss or deduction cannot be avoided by the Issuer taking reasonable measures available to it and, in the case of a Tax Event, the opinion referred to in Condition 6.4(b) and, in the case of an

Accounting Event, the opinion referred to in Condition 6.4(c). The Fiscal Agent shall be entitled, without liability to any person, to accept such certification and opinion as sufficient evidence that a Tax Event or an Accounting Event (as the case may be) has occurred, in which event it shall be conclusive and binding on the Holders.

(b) "**Tax Event**" means that, in the opinion of a recognized independent tax adviser, on or after October 18, 2018 as a result of:

(i) any amendment to, or change in, the laws (or any rules or regulations thereunder) of a Relevant Jurisdiction which is enacted, promulgated, issued or becomes effective otherwise on or after October 18, 2018; or

(ii) any amendment to, or change in, an official and binding interpretation of any such laws, rules or regulations by any legislative body, court, governmental agency or regulatory authority (including the enactment of any legislation and the publication of any judicial decision or regulatory determination) which is enacted, promulgated, issued or becomes effective otherwise on or after October 18, 2018; or

(iii) any generally applicable official interpretation or pronouncement that provides for a position with respect to such laws or regulations that differs from the previous generally accepted position which is issued or announced on or after October 18, 2018,

interest paid by the Issuer on the Securities is no longer, or within 90 calendar days of the date of that opinion will no longer be, deductible (or the entitlement to make such deduction shall be materially reduced) by or on behalf of the Issuer for corporate income tax purposes in a Relevant Jurisdiction.

(c) An "**Accounting Event**" will occur if after October 18, 2018, the Issuer has received an opinion from internationally recognized independent auditors, which may be the Issuer's independent auditors, stating that the Securities, in whole or in part, will no longer be recorded as "equity" in the consolidated financial statements of the Issuer prepared in accordance with International Financial Reporting Standards as adopted in the European Union or any other accounting regime that is the primary accounting regime under which the Issuer presents such financial statements.

6.5 **Purchase of Securities**

The Issuer or any of its Subsidiaries may, subject to applicable laws and any rules of any stock exchange or exchanges on which any of the Securities are listed from time to time, at any time purchase any amount of Securities in the open market or otherwise at any price. Such acquired Securities may at the Issuer's election be cancelled or held or resold.

In the event that the Issuer and/or any Subsidiary of the Issuer has, individually or in aggregate, purchased (and not resold) Securities equal to or in excess of 80% of the aggregate Principal Amount of the Securities issued on the Issue Date, the Issuer may redeem the remaining Securities (in whole but not in part) at any time at their Principal Amount plus any interest accrued up to (but excluding) the relevant Redemption Date and any outstanding Deferred Interest, on the giving of not less than 30 and not more than 60 calendar days' irrevocable notice of redemption to the Holders and the Agents.

6.6 **Cancellations**

All Securities 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.

6.7 **Put Right**

The Guarantor will purchase from each Holder, upon the occurrence of certain events during the period commencing on the Issue Date and ending on the First Call Date as described in Condition 6.8, the Securities held by such Holder (in whole but not in part) at their Principal Amount plus any interest accrued up to (but excluding) the relevant Put Date (as defined below) and any outstanding Deferred Interest, all in accordance with the terms of this Condition 6 (the "**Put Rights**").

These Put Rights are not cumulative, and upon an exercise or a deemed exercise of a Put Right, the other Put Right shall terminate. To the extent that delivery of written notice is required to exercise a Put Right, such Put Right with respect to a Holder shall terminate if the Agent and the Guarantor do not receive a duly completed and signed notice from such Holder within the specified period for delivery of notice.

All Put Rights shall terminate upon delivery by the Issuer of written notice of redemption in the manner required under this Condition 6.

6.8 **(a) Bankruptcy prior to the First Call Date**

If a Bankruptcy Event (as defined below) occurs at any time from the Issue Date to 30 days prior to the First Call Date, to the extent permitted by applicable law, each Holder will have the right (the "**Bankruptcy Put Right**") to require the Guarantor to purchase on the Bankruptcy Put Date (as defined below) the Securities held by such Holder (in whole but not in part) at their Principal Amount plus any interest accrued up to (but excluding) the Bankruptcy Put Date and any outstanding Deferred Interest. If a Bankruptcy Event giving rise to such right has occurred during such period, it shall be deemed that the Bankruptcy Put Right has been irrevocably exercised by all Holders without the delivery of any written notice by the Holders of their intention to exercise the Bankruptcy Put Right.

If a Bankruptcy Event occurs during such period, the Issuer shall immediately, and in any event within three Business Days of such occurrence, deliver a written notice of such occurrence to the Fiscal Agent, together with a court document evidencing such occurrence, failure of which entitles any Holder, at any time after three Business Days of the occurrence of the Bankruptcy Event, to instruct the Fiscal Agent to notify the Guarantor. Upon receipt of such notice from the Issuer or a Holder (as the case may be), the Fiscal Agent shall immediately, and in any event within three Business Days, deliver a written notice to the Holders and the Guarantor that the deemed exercise of the Bankruptcy Put Right has occurred.

"**Bankruptcy Event**" means adjudication by a court of competent jurisdiction declaring that the Issuer (i) is subject to insolvency proceedings (faillite) within the meaning of Regulation (EU)

2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast) (the "**Insolvency Regulation**"), (ii) is subject to judicial liquidation in accordance with Article 1200-1 of the Luxembourg law of August 10, 1915 on commercial companies, as amended, or (iii) is subject to any similar foreign law proceedings in accordance with the Insolvency Regulation.

"**Bankruptcy Put Date**" means the date that is 10 Business Days after the Guarantor receives from the Fiscal Agent a written notice that a Bankruptcy Event has occurred.

(b) Issuer's Election not to Redeem on the First Call Date

If the Issuer elects not to redeem the Securities on the First Call Date as provided for in Condition 6.2, to the extent permitted by law, each Holder shall be deemed to have exercised its right (the "**Non-Call Put Right**") to require the Guarantor to purchase on the First Call Date (such date, the "**Non-Call Put Date**") all of the Securities held by such Holder at their Principal Amount plus any interest accrued up to (but excluding) the Non-Call Put Date and any outstanding Deferred Interest.

"**Put Date**" means the Bankruptcy Put Date or the Non-Call Put Date, as applicable.

6.9 **Purchase Following Exercise of a Put Right; Guarantor as Transferee**

In the event a Put Right is exercised or deemed to be exercised, each Holder shall deliver a written notice to the Fiscal Agent, by not less than seven days prior to the relevant Put Date, that specifies (i) the name of such Holder, (ii) the Put Date, (iii) the principal amount of the Securities to be purchased by the Guarantor, (iv) the ISIN and Common Code or other identifying numbers of the Securities to be purchased by the Guarantor, (v) the Condition of the Securities under which the Put Right has become exercisable, (vi) the cash account and securities account details for settlement and (vii) the contact telephone and facsimile numbers of such Holder. Any notices to be given to the Guarantor under this Condition 6 shall be copied to appropriate parties as specified in the Fiscal Agency Agreement, including the Fiscal Agent, the Paying Agent or the clearing system, as the case may be. In the event a Put Right is exercised or deemed to be exercised, each Holder shall also authorize the clearing system to block its position in the Securities held by such Holder and notify the Fiscal Agent and Paying Agent of such exercise.

Payment by the Guarantor of the Principal Amount plus any interest accrued up to (but excluding) the Put Date and any outstanding Deferred Interest will be in U.S. dollars and will be made simultaneously with delivery of the Securities into the designated securities account of the Guarantor (i) with respect to a holder of the Global Certificate, by wire transfer to the registered account of such holder or (ii) with respect to a holder of individual Definitive Certificates, by check drawn on a bank in New York mailed to the registered address of the holder of the individual Definitive Certificate.

Exercise or deemed exercise of a Put Right shall be invalid if not accompanied by the Definitive Certificate (other than the Global Certificate) that represents the Securities for which such Put Right is being exercised. In such case, the Guarantor shall not be required to purchase those Securities pursuant to the relevant Put Right.

Upon the purchase of Securities in accordance with this Condition 6.9, the Guarantor, as transferee of such Securities, will be entitled to any and all rights of a Holder with respect to the Securities so acquired.

7. PAYMENTS

7.1 Payments of principal and interest in respect of each Security will be made by transfer to the registered account of the Holder or by U.S. dollar check drawn on a bank (nominated in writing to the Paying Agent by the Holder) that processes payments in U.S. dollars mailed to the registered address of the Holder if it does not have a registered account, provided that the nomination is received by the Paying Agent not later than 10 Payment Business Days before any date on which payment is scheduled. Interest on Securities due on an Interest Payment Date will be paid to the holder shown on the Register at the close of business on the date (the "**record date**") being the fifteenth day before the due date for the payment of interest.

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 (including Deferred Interest) and on redemption of the Securities 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 City, Seoul and London.

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

8. TAXATION AND GROSS-UP

8.1 Payment without withholding

All payments in respect of the Securities 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 Securities 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 Security:

(a) held by or on behalf of a Holder or beneficial owner who is liable for such Relevant Taxes in respect of such Security by reason of having some connection with the applicable Relevant Jurisdiction other than the mere holding of the Security 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 Security by reason of having some relationship with the Issuer for the applicable Relevant Jurisdiction's tax purposes other than the mere holding of such Security; 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 applicable 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 the applicable statute, treaty, rule, regulation, agreement or administrative practice of a 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 on a Security presented for payment (where presentation is required) by a Holder or any other person if such Holder or other person could have avoided such Relevant Tax by presenting such Security to another paying agent; or

(e) where such withholding or deduction is imposed only by virtue of a Holder or any other person not having presented the Security (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 Security been surrendered during such 30-day period; or

(f) in the event that a Holder or any other person who holds an interest in the Security 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 Security; or

(g) where such withholding or deduction is made pursuant to the amended Luxembourg law dated December 23, 2005; or

(h) where such withholding or deduction is made pursuant to the amended Luxembourg law dated July 24, 2015 implementing the Foreign Account Tax Compliance Act; or

(i) where such withholding or deduction is imposed as a result of any combination of (a) through (h) 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 Securities.

8.2 **Additional Amounts**

Any reference in these Conditions to any amounts in respect of the Securities (including in relation to any Deferred Interest and any additional interest accumulated thereon pursuant to Condition 5.3(a)) will be deemed also to refer to any Additional Amounts which may be payable under this Condition 8 or under any undertakings given in addition to, or in substitution for, this Condition pursuant to the Fiscal Agency Agreement.

8.3 **Documentation**

The Issuer will provide the Fiscal Agent with the official acknowledgment, if any, of the applicable 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 Securities 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 Securities except for any Relevant Tax payable in connection with a transfer of Securities pursuant to Condition 2.1 and except regarding Luxembourg registration duties (*droit d'enregistrement*) for any Luxembourg tax payable due to a registration, submission or filing by any Holder of any Security where such registration, submission or filing is or was not required to maintain or preserve the rights of the Holder under the Securities. Subject to the first sentence of this Condition 8.4, the Issuer will also pay and indemnify the Holders and beneficial owners of the Securities 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 Securities.

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, including any Deferred Interest and any additional interest accumulated thereon pursuant to Condition 5.3(a)) 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) having the same terms and conditions as the Securities 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 Securities (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 the Issuer may determine at the time of issue.

11. NON-PAYMENT

If:

(a) the Issuer does not pay any principal or any interest or other amount due and payable in respect of the Securities or any of them, in each case in full within 30 days of its due date; or

(b) an order is made (other than an order successfully appealed or permanently stayed within 60 days) by a court in a Relevant Jurisdiction or a resolution is passed by the shareholders of the Issuer, for the Winding-Up of the Issuer (other than for the purposes of Solvent Reorganization of the Issuer),

then the Issuer shall be deemed to be in default under the Securities, and the Holders of at least one-quarter in Principal Amount of the Securities then outstanding may, subject to satisfaction of the relevant requirements of applicable laws and regulations, initiate steps, actions or proceedings for the Winding-Up of the Issuer and/or prove in the Winding-Up of the Issuer in respect of the Securities.

Notwithstanding the above, this Condition 11 shall not apply to the following:

(A) the non-payment by the Issuer of any amount due and payable in respect of any of the Securities:

- (i) in order to comply with any fiscal or other law or regulation or with the order of any court of competent jurisdiction, in each case applicable to such payment; or
- (ii) during any period where there is doubt as to the validity or applicability of any such law, regulation or order, in accordance with advice given by an independent law firm as to such validity or applicability; or
- (iii) to the extent such amount is paid in full within 30 days of its due date by the Guarantor; or

(B) the deferral of any Interest Amount pursuant to Condition 5.3; or

(C) the automatic extension of the term of the Securities as a result of non-redemption at the option of the Issuer on October 25, 2048 or any subsequent Issuer Redemption Dates pursuant to Condition 6.1.

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;
- (c) not materially prejudicial to the interests of Holders as a whole; or
- (d) 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 Securities 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 Securities (as reasonably determined by the Issuer);

(ii) have a rating ascribed to them by Moody's Investors Service, Inc. which is equal to or higher than that ascribed to the Securities immediately prior to such substitution;

(iii) are guaranteed by the Guarantor to the same extent that the Securities 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 (i) to (iii) above) use reasonable efforts to assist the Issuer in such substitution of the Securities (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 securities into which the Securities 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 Securities, subject to:

(i) the Fiscal Agent being satisfied that the interests of the Holders will not be materially prejudiced by the substitution; and

(ii) 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 Securities 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 Securities or the approval of persons entitled to vote not less than a majority of the Principal Amount of such Securities 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 Securities, or at an adjourned meeting, one or more persons entitled to vote 25% in Principal Amount of the outstanding Securities.

(b) Notwithstanding Condition 12.3(a) above, 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 Securities (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 Securities or the approval of persons entitled to vote not less than 75% of the Principal Amount of such Securities 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 Securities, or at an adjourned meeting, one or more persons entitled to vote one-third in Principal Amount of the then outstanding Securities.

(c) On a poll each Holder of a Security 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 Securities.

(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 Securities; (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 Securities 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 Securities 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 or a Relevant Jurisdiction 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, provided that it is not, in the opinion of the Fiscal Agent, materially prejudicial to the interests of the Holders.

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 Securities are for the time being listed or admitted to trading.

13. NOTICES

All notices regarding the Securities 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 Securities 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 Securities 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 Securities 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 Securities 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.

All notices from the Holders to the Guarantor shall be sent by the Holders directly to the specified office of the Guarantor, and the Agents shall have no obligation or responsibility on the delivery to, or non-receipt by, the Guarantor of such notice.

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 Securities 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, 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;

(d) a transfer agent; and

(e) a calculation agent.

15. GOVERNING LAW AND SUBMISSION TO JURISDICTION

15.1 Governing law

The Securities 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 Securities, each of the Issuer and the Guarantor will irrevocably submit to the non-exclusive 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 Doosan Heavy Industry America Holdings Inc. at 400 Kelby Street, Fort Lee, NJ 07024, United States of America as its agent for service of process in respect of any suit, legal action or proceedings arising out of or in connection with the Securities 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 its New York Representative Office at 460 Park Avenue, 8th Floor, New York, NY 10022, United States of America as its agent for service of process in respect of any suit, legal action or proceedings arising out of or in connection with the Securities 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 acquired or hereafter may acquire any immunity (sovereign or otherwise) from any legal action, suit or proceeding, from jurisdiction of any court or from set-off or any legal process (including any immunity from nonexclusive jurisdiction or from service of process or from any execution to satisfy a final judgment or from attachment or in aid of such execution or otherwise) with respect to itself or any of its property, the Issuer and the Guarantor irrevocably waive, to the fullest extent permitted under applicable law, any such right of immunity or claim thereto which may now or hereafter exist, and agree not to assert any such right or claim in any action or proceeding against it arising out of or based on the Securities or these Conditions.

16. DEFINITIONS

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

"**Accounting Event**" has the meaning specified in Condition 6.4(c).

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

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

"**Authorized Signatory**" has the meaning given to it in the Fiscal Agency Agreement.

"**Bankruptcy Event**" has the meaning specified in Condition 6.8(a).

"**Bankruptcy Put Date**" has the meaning specified in Condition 6.8(a).

"**Bankruptcy Put Right**" has the meaning specified in Condition 6.8(a).

"**Business Day**" means a day on which banks are open for business in New York City, Seoul, London and Luxembourg.

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

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

"**Common Share**" means a fully paid ordinary share in the capital of the Issuer.

"**Comparable Treasury Issue**" means the U.S. Treasury security selected by the Reference Treasury Dealer as having a maturity of three years that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities with a maturity of three years.

"**Comparable Treasury Price**" means, with respect to a determination date, (i) the average of three Reference Treasury Dealer Quotations for such determination date, after excluding the highest and lowest of such Reference Treasury Dealer Quotations, or (ii) if fewer than three such Reference Treasury Dealer Quotations are available, the average of all such quotations.

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

"**Deferred Interest**" has the meaning specified in Condition 5.3(a) and will, where relevant, include any amount of additional interest accrued thereon in accordance with Condition 5.3(a).

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

"**Discretionary Obligations**" means, in relation to the Issuer or Doosan Heavy, any class of its share capital or any other securities issued by it which have discretionary dividends, distributions or other discretionary payments, except for the Securities.

"**First Call Date**" has the meaning specified in Condition 5.2(a).

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

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

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

"**Gross-Up Event**" has the meaning specified in Condition 6.3(c).

"**Guarantee**" has the meaning specified in Condition 4.

"**Guarantor**" means The Export-Import Bank of Korea.

"**Holder**" has the meaning specified in Condition 1.2.

"**Initial Credit Spread**" means 0.875% per annum.

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

"**Interest Payment Date**" has the meaning specified in Condition 5.2.

“**Interest Rate**” has the meaning specified in Condition 5.2.

“**International Investment Securities**” has the meaning specified in Condition 3.2.

“**Issue Date**” means October 25, 2018.

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

“**Issuer**” means Doosan Power Systems S.A., a public limited liability company (*société anonyme*) organized and existing under the laws of the Grand Duchy of Luxembourg, with its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, and registered with Luxembourg trade and companies register under number B 125.754.

“**Issuer Redemption Date**” has the meaning specified in Condition 6.1.

“**Non-Call Put Date**” has the meaning specified in Condition 6.8(b).

“**Non-Call Put Right**” has the meaning specified in Condition 6.8(b).

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

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

“**Payment Reference Date**” means: (i) the next following Interest Payment Date on which the Issuer elects to pay the relevant Deferred Interest at its discretion pursuant to Condition 5.5(a); or (ii) the date on which the Issuer is required to pay the relevant Deferred Interest pursuant to Condition 5.5(b).

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

“**Put Date**” has the meaning specified in Condition 6.8(b).

“**Put Rights**” has the meaning specified in Condition 6.7.

“**record date**” has the meaning specified in Condition 7.1.

“**Redemption Date**” means any date on which the Securities become due for redemption in accordance with these Conditions.

“**Reference Treasury Dealer**” means each of the three internationally recognized investment banking firms selected by the Issuer that are primary U.S. Government securities dealers.

“**Reference Treasury Dealer Quotations**” means with respect to each Reference Treasury Dealer and any determination date, the average, as determined by the Calculation Agent, of the bid and asked prices for the Comparable Treasury Issue, expressed in each case as a percentage of its principal amount, quoted in writing to the Calculation Agent by such Reference Treasury Dealer at 5:00 p.m., New York City time, on the two Business Days immediately preceding such determination date.

“**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 Luxembourg, the United Kingdom 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.

"**Reset Date**" means the First Call Date and each date that falls three, or a multiple of three, years following the First Call Date.

"**Reset Determination Date**" means the second Business Day prior to the relevant Reset Date.

"**Reset Period**" means the period from (and including) the First Call Date to (but excluding) the next Reset Date, and each successive period from (and including) a Reset Date to (but excluding) the next succeeding Reset Date.

"**Reset Rate**" has the meaning specified in Condition 5.2(b).

"**Securities**" has the meaning specified in the preamble to these Conditions, and "Security" shall be construed accordingly.

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

"**Solvent Reorganization**" means, with respect to the Issuer, solvent voluntary 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 Securities 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 (including Deferred Interest) in respect of the Securities;

(ii) modification of the date of payment in respect of any principal or interest (including Deferred Interest) in respect of the Securities;

(iii) alteration of the currency in which payments under the Securities 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, Purchase and Put) or 8 (Taxation and Gross-up);

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

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

"**Step Up Margin**" means 1.30% per annum.

"**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).

"**Tax Event**" has the meaning specified in Condition 6.4(b).

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

"**Treasury Rate**" means, in relation to a Reset Period and the Reset Determination Date in relation to such Reset Period, the rate in % per annum equal to the yield, under the heading that represents the average for the week immediately prior to such Reset Determination Date, appearing in the most recently published statistical release designated "H.15(519)" or any successor publication that is published weekly by the Board of Governors of the Federal Reserve System (available on the website of the Board of Governors Federal Reserve System at http://www.federalreserve.gov/release/h15/, or any successor site) and that establishes yields on actively traded U.S. Treasury securities adjusted to constant maturity under the caption "Treasury constant maturities" for the maturity corresponding to the Comparable Treasury Issue. If such release (or any successor release) is not published during the week preceding the Reset Determination Date or does not contain such yields, "Treasury Rate" means the rate equal to the semi-annual equivalent yield to maturity of the Comparable Treasury Issue, calculated using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for the Reset Determination Date.

"**Winding-Up**" means, with respect to the Issuer, a final and effective order or resolution for the bankruptcy (as set forth in Book III of the Luxembourg Commercial Code), winding up, liquidation or any other proceedings in respect of the Issuer, which commences with a view to liquidation of the Issuer.

THE GLOBAL CERTIFICATE

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

Meetings

The registered holders of the Securities 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 Securities in respect of which the Global Certificate is issued.

Cancellation

Cancellation of any Securities following its redemption or purchase by the Issuer will be effected by a reduction in the principal amount of the Securities in the Register.

Transfers

Transfers of interests in the Securities 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 Securities 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 Securities 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.

FORM AND TITLE

The Securities are issued in registered form in accordance with the provisions of Article 470-1 of the Luxembourg law of August 10, 1915 on commercial companies, as amended (the "Luxembourg Companies Law").

The Issuer will maintain a register of holders of Securities at its registered office in accordance with the provisions of the Luxembourg Companies Law which shall match the Register with regard to the entries therein. In the event of any discrepancies between the Register and the register held by the Issuer at its registered office, the register held by the Issuer at its registered office shall prevail for Luxembourg law purposes.

The Fiscal Agency Agreement contains provisions which oblige the Registrar to promptly provide an updated copy of the Register to the Issuer on the issue date of the Securities and at any time following any amendment to the Register, in order to allow the Issuer to update the register held by it at its registered office to reflect the Register.

USE OF PROCEEDS

The net proceeds to the Issuer from this offering (after deducting underwriting commissions but not estimated expenses relating to the offering) are expected to be US$297,681,000. The Issuer intends to use such net proceeds for repayment of certain existing debt and other general corporate purposes.

THE ISSUER

Overview

The Issuer is a wholly-owned subsidiary of Doosan Heavy. The Issuer specializes in providing power plant equipment and maintenance, repair and overhaul (“MRO”) services to the thermal and nuclear power generation industry and the oil, gas and petrochemical industries by leveraging its proprietary technologies and efficient project management capability. The Issuer has obtained core technological expertise through various acquisitions, including core power plant boiler technology through the acquisition in 2006 of a controlling interest in United Kingdom-based Mitsui Babcock, which was subsequently renamed Doosan Babcock Ltd. (“Doosan Babcock”), core power plant steam turbine technology through the acquisition in 2009 of a controlling interest in Czech Republic-based Škoda Power, which was subsequently renamed Doosan Škoda Power s.r.o. (“Doosan Škoda Power”), and circulating fluidized bed (“CFB”) boiler technology, waste-to-energy technology and air pollution control technology through the acquisition in 2011 of a controlling interest in Germany-based AE&E Lentjes, which was subsequently renamed Doosan Lentjes GmbH (“Doosan Lentjes”).

The Issuer and Doosan Heavy are member companies of the Doosan Group, which was founded in 1896 and was one of the twenty largest business groups in Korea in terms of combined assets as of May 2018, according to the Korea Fair Trade Commission. The Issuer is incorporated in Luxembourg and its registered office is at 6, rue Eugène Ruppert, L-2453 Luxembourg.

Business Areas

The Issuer operates through its principal subsidiaries, Doosan Babcock, Doosan Škoda Power and Doosan Lentjes.

Doosan Babcock. Doosan Babcock offers boiler solutions and provides asset management services, including plant life extension, MRO and technical services, to existing nuclear and thermal power plants as well as oil, gas and petrochemical plants. With respect to nuclear power plants, Doosan Babcock also provides integrated engineering, procurement and construction (“EPC”) services and nuclear power plant decommissioning services.

Doosan Babcock provides subcritical and supercritical boiler solutions for thermal power plants with unit sizes ranging from 100 MW to more than 660 MW, utilizing various firing technologies and fuels. Doosan Babcock also provides boiler retrofitting and upgrade services to increase energy efficiency, enhance safety and reliability, reduce emissions and add operational improvements, including biomass co-firing and conversion services, installment of precision combustion systems using nitrogen oxide reduction technologies and installment of secondary nitrogen oxide control solutions to optimize emission controls.

Doosan Babcock is a major supplier of specialist MRO services to existing nuclear and thermal power plants and oil, gas and petrochemical plants, including project design and construction, plant repair and maintenance, asset integrity assessment, plant shutdown and turnaround management as well as plant life extension and upgrade services. By providing such services, Doosan Babcock strives to reduce plant maintenance costs, minimize operational problems and stoppages, increase fuel savings and enhance the lifetime performance of the power generation and industrial plants that it services.

In the nuclear power generation industry, Doosan Babcock offers fully-integrated EPC services to construct new nuclear power plants. In addition, Doosan Babcock provides decommissioning services for nuclear facilities in compliance with applicable regulatory standards and offers techniques and processes for the removal of radioactive waste and the remediation of nuclear facilities.

Doosan Škoda Power. Doosan Škoda Power designs, manufactures and supplies steam turbines and provides systems, components and steam turbine MRO services to thermal and nuclear power plants, district heating systems, municipal waste and biomass incineration plants and industrial plants.

Doosan Škoda Power manufactures steam turbines that generate 10 MW to 1,200 MW of power as well as auxiliary components such as condensers and heat exchangers, custom-made equipment for turbine islands and complete steam turbine engine halls. Doosan Škoda Power develops steam turbines to meet a wide range of customer requirements, including steam turbines for combined cycle applications, back-pressure and condensing steam turbines for district heating with regulated steam consumption, and steam turbines for coal-fired power plants that meet strict emissions targets by operating at increasingly high temperatures (between 600°C and 620°C) using ultra-supercritical steam technology.

In addition, Doosan Škoda Power provides steam turbine MRO services and applies technology solutions to modernize and retrofit existing steam turbine equipment to increase energy efficiency, enhance reliability and extend the service life of such steam turbines and auxiliary components.

Doosan Lentjes. Doosan Lentjes develops and provides proprietary CFB boiler technologies, waste-to-energy technologies and air pollution control technologies to the thermal power plant, industrial and municipal sectors.

Doosan Lentjes designed and manufactured the first CFB boiler featuring a fluidized bed heat exchanger in Germany in 1982. As of December 31, 2017, CFB boilers designed by Doosan Lentjes generated power in more than 100 units around the world with power generation capabilities of up to 300 MWe per unit. Doosan Lentjes' CFB boilers are designed to enable the combustion of a wide range of fuel types, particularly those with difficult combustion properties such as low calorific and reactive values or low ash melting temperatures. Its CFB boiler technology uses an integrated emission control system that removes sulphur dioxide from the emission process and prevents the formation of thermal nitrogen oxide.

Doosan Lentjes provides waste-to-energy technologies aimed at reducing the volume of residual wastes, generating the highest possible energy yield and maximizing the reduction of pollutants and toxins. In addition, Doosan Lentjes has developed air pollution control technologies to remove sulphur dioxide, dust and other pollutants from flue gases after the combustion process so that its customers can meet strict emissions targets.

Sales and Marketing

The Issuer has customers in more than 30 countries across Europe, North America, the Middle East and Asia, with a concentration in the United Kingdom, the Czech Republic, Germany, Poland and the United States. Its customers consist mainly of public and private electric utility companies as well as industrial customers in oil, gas, petrochemical and pharmaceutical industries that utilize the Issuer's equipment and incorporate its component products into their production processes. The Issuer believes that demand for its power plant MRO services will continue to grow particularly in Eastern Europe, the Middle East and Africa in light of the need maintain and repair power plants that were built decades ago in these regions, and it plans to devote increased sales and marketing efforts to these regions.

The Issuer generally enters into long-term service contracts with its customers that are renewable every three to five years with respect to its MRO services. The Issuer believes that such long-term relationships contribute to the predictability and stable nature of its revenues. Orders for power generation equipment are typically carried out on a fixed price basis and according to a predetermined timetable, pursuant to the terms of a delivery contract.

The Issuer markets its products and services primarily through global direct sales forces maintained by it through local sales offices located in key strategic locations around the world, while also leveraging the broad customer base of Doosan Heavy. Such sales offices support the Issuer's marketing activities by identifying and communicating with potential local customers, identifying business opportunities and providing information regarding local market conditions.

Competition

The Issuer faces a broad range of competition from existing and new competitors ranging from multinational companies to specialized companies that focus on a limited number of product lines or operate in specific regions. The Issuer competes with its competitors based mainly on the following factors: product performance, quality and reliability of products and services, responsiveness to customers in developing customized solutions and products, ability to accurately identify and respond to emerging regulatory and industry trends and customer demand for product features and performance characteristics, proven safety track record, effectiveness of sales and marketing efforts to build and maintain customer relationships, brand recognition and financial strength.

Doosan Babcock's principal competitors in the United Kingdom for its nuclear power plant MRO services include Amec Foster Wheeler, Cavendish Nuclear and Jacobs, and its principal competitors in the boiler solutions market include General Electric, Hitachi, Babcock Power and Babcock & Wilcox. Doosan Škoda Power's principal competitors in the steam turbine market include Alstom, General Electric and Siemens. Doosan Lentjes' principal competitors in the CFB boiler market include Sumitomo SHI FW.

Properties

The Issuer has major boiler equipment manufacturing facilities in the United Kingdom, Germany and Poland and steam turbine equipment manufacturing facilities in the Czech Republic.

Environmental Matters

The Issuer uses and generates a variety of chemicals, by-products, gas emissions and other waste materials in its manufacturing operations and also handles radioactive waste in connection with the decommissioning of nuclear power plants. The Issuer is subject to certain regulations in the United Kingdom and other countries in which it does business relating to the use, storage, discharge, treatment and disposal of such materials.

The Issuer employs licensed environmental specialists for each area of environmental concern, such as specialists to monitor air and water quality, toxic materials and radiation levels. The Issuer has a comprehensive environmental safety and health management system to eliminate or minimize the possible negative effects of the hazardous materials it handles on the environment and its employees' health. The Issuer educates and trains its employees on environmental issues and the proper handling of hazardous substances and requires adherence to corporate guidelines on environmental protection measures. The Issuer has installed equipment and adopted processes designed to comply with environmental laws and regulations as well as its internal compliance thresholds. The Issuer believes that it is in compliance in all material respects with applicable environmental laws and regulations. There is, nevertheless, a risk that the Issuer may be subject to environmental liabilities or litigation that could result in the assessment of damages, imposition of fines, suspension of production or cessation of operations. In addition, changes in environmental regulations could necessitate additional capital expenditures, modification of operations or other compliance actions.

Employees

As of December 31, 2017, the Issuer had approximately 5,500 full-time employees on a consolidated basis and also employed a significant number of part-time or contract employees. The Issuer's success depends to a significant extent upon its ability to attract, retain and motivate highly-skilled and qualified personnel. The Issuer considers labor relations with its work force to be good.

Legal Proceedings

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

THE GUARANTOR

Overview

The Bank was established in 1976 as a special governmental financial institution pursuant to the Export-Import Bank of Korea Act, as amended (the "KEXIM Act"). Since its establishment, the Bank has been promoting the export and competitiveness of Korean goods and services in international markets. To this end, the Bank has introduced financing facilities and implemented lending policies that are responsive to the needs of Korean exporters.

The Bank's primary purpose, as stated in the KEXIM Act, is to "promote the sound development of the national economy and economic cooperation with foreign countries by extending the financial aid required for export and import transactions, overseas investment and the development of natural resources abroad." Over the years, the Bank has developed various financing facilities and lending policies that are consistent with the Government's overall economic policies. In the latter part of the 1980s, as a result of changing trade conditions and the increased internationalization of the Korean economy, overseas investment credits and import credits were promoted and began to constitute an important portion of the Bank's business. In recent years, the Bank has focused on the development of new financing facilities, including structured financing for ships and project financing for the construction of industrial plants and the development of natural resources abroad.

As of December 31, 2017, the Bank had ₩71,884 billion of outstanding loans, including ₩41,369 billion of outstanding export credits, ₩24,107 billion of outstanding overseas investment credits and ₩3,726 billion of outstanding import credits, as compared to ₩76,724 billion of outstanding loans, including ₩42,628 billion of outstanding export credits, ₩27,527 billion of outstanding overseas investment credits and ₩3,741 billion of outstanding import credits as of December 31, 2016.

Although the Bank's management has control of the Bank's day-to-day operations, the Bank's operations are subject to the close supervision of the Government. The Government's determination each fiscal year regarding the amount of financial support to extend to the Bank, in the form of contributions to capital or transfers of its income to reserves, plays an important role in determining the Bank's lending capacity. The Government has the power to appoint or dismiss the Bank's President, Deputy President, Senior Executive Directors and Auditor.

The Government supports the Bank's operations pursuant to Article 37 of the KEXIM Act. Article 37 of the KEXIM Act provides that "the annual net losses of the Export-Import Bank of Korea shall be offset each year by the reserve, and if the reserve be insufficient, the Government shall provide funds to cover the deficit." As a result of the KEXIM 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 reserves, consisting of the Bank's surplus and capital surplus items, are insufficient to cover any of the Bank's annual net losses. In light of the above, if the Bank has insufficient funds to make any payment under any of its obligations, including the debt securities 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 37 do not, however, constitute a direct guarantee by the Government of the Bank's obligations, and the provisions of the KEXIM Act, including Article 37, may be amended at any time by action of the National Assembly.

In January 2014, the Government amended the KEXIM Act to:

- increase the Bank's authorized capital from ₩8,000 billion to ₩15,000 billion;
- expand the Bank's operation scope that enables the Bank, among other things, to invest in (i) funds intended to support export and import transactions by small and medium-sized

enterprises and (ii) special purpose companies that carry out value added overseas development projects in a flexible way; and

- reduce restrictions on the Bank's financing and investment activities by providing additional flexibility to the Bank to cope with changes in market conditions.

In March 2016, the Government amended the KEXIM Act, which took effect at the end of June 2016, to strengthen its enforcement powers by allowing:

- the Minister of Economy and Finance to impose any necessary sanctions against the officers of the Bank; and

- the Financial Services Commission to request the Minister of Economy and Finance to apply sanctions against the employees of the Bank.

Capitalization

As of December 31, 2017, the Bank's authorized capital was ₩15,000 billion and capitalization was as follows:

		December 31, 2017 (1) (billions of Won)
Long-Term Debt (2)(3)(4)(5)(6):		
Borrowings in Korean Won	₩	-
Borrowings in Foreign Currencies		4,316
Export-Import Financing Debentures		43,109
Total Long-Term Debt	₩	47,425
Capital and Reserves:		
Capital Stock (7)	₩	11,815
Additional Paid-in-Capital		-
Capital Adjustments		(129)
Retained Earnings		708
Legal Reserve (8)		329
Voluntary Reserve (8)		-
Reserve for Bad Loans (9)		206
Unappropriated Retained Earnings		173
Other Components of Equity (10)		120
Total Capital and Reserve	₩	12,513
Total Capitalization (8)	₩	59,938

(1) Except as described in this Offering Circular, there has been no material adverse change in the Bank's capitalization since December 31, 2017.
(2) Consists of borrowings and debentures with maturities of more than a year remaining.
(3) The Bank has translated borrowings in foreign currencies as of December 31, 2017 into Won at the rate of ₩1,071.40 to US$1.00, which was the market average exchange rate as announced by the Seoul Monetary Brokerage Services Ltd., on December 31, 2017.
(4) As of December 31, 2016, the Bank had contingent liabilities totaling ₩42,809 billion, which consisted of ₩38,961 billion under outstanding guarantees and acceptances and ₩3,848 billion under contingent guarantees and acceptances issued on behalf of its clients. For further information relating to the Bank's contingent liabilities under outstanding guarantees as of December 31, 2017, see Note 36 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

(5) As of December 31, 2017, the Bank had entered into 468 interest rate related derivative contracts with a notional amount of ₩38,781 billion and 739 currency related derivative contracts with a notional amount of ₩30,970 billion in accordance with its policy to hedge interest rate and currency risks. See Note 20 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.
(6) See "—Description of Assets and Liabilities—Sources of Funding" for an explanation of these sources of funds. All the Bank's borrowings, whether domestic or international, are unsecured and unguaranteed.
(7) As of December 31, 2017, the Bank's authorized ordinary share capital was ₩15,000 billion and issued fully-paid capital stock was ₩11,815 billion. See "—Business—Government Support and Supervision."
(8) See "—Business—Government Support and Supervision" for a description of the manner in which annual net income is transferred to the legal reserve and may be transferred to the voluntary reserve.
(9) If the estimated allowance for credit loss determined by K-IFRS for the accounting purposes is lower than that for regulatory purposes as required by Supervisory Regulation of Banking Business, the Bank reserves such difference as the regulatory reserve for bad loans. See Note 23 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.
(10) See Note 22 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

Business

Purpose and Authority

The Bank was established in 1976 as a special governmental financial institution pursuant to the KEXIM Act. The KEXIM Act, the Enforcement Decree of the KEXIM Act (the "KEXIM Decree") and the Bank's Articles of Incorporation (the "By-laws") define and regulate the Bank's powers and authority. The Bank is treated as a special juridical entity under Korean law and are not subject to certain of the laws regulating activities of commercial banks.

The Bank was established, as stated in the KEXIM Act, to "promote the sound development of the national economy and economic cooperation with foreign countries by extending the financial aid required for export and import transactions, overseas investment and the development of natural resources abroad." As an instrument in serving the Government's public policy objectives, the Bank does not seek to maximize its profits. The Bank does, however, strive to maintain an adequate level of profitability to strengthen the Bank's equity base in order to support the growth in the volume of its business.

The Bank's primary purpose has been the provision of loans and guarantees to facilitate Korean companies' exports and overseas investments and projects. Most of the Bank's activities have been carried out pursuant to this authority.

The Bank has the authority to undertake a range of financial activities. These fall into four principal categories:

- export credits;
- overseas investment credits;
- import credits; and
- guarantee facilities.

Export credits include loans to facilitate Korean exports of capital and non-capital goods and technical and non-technical services. Overseas investment credits consist of loans to finance Korean overseas investments and projects. Import credits include the extension of loans to finance Korean imports of essential materials and natural resources. Guarantee facilities are made available to support the obligations of Korean exporters and importers.

The Bank also has the authority to administer, on behalf of the Government, the Government's Economic Development Cooperation Fund and the Inter-Korea Cooperation Fund, formerly known as South and North Korea Co-operation Fund.

The Bank may also undertake other business activities incidental to the foregoing, including currency and interest rate swap transactions. The Bank has engaged in such swap transactions for hedging purposes only.

Government Support and Supervision

The Government's determination each fiscal year, regarding the amount of financial support to extend to the Bank, plays an important role in determining the Bank's lending capacity. Such support has included contributions to capital, loans and transfers of the Bank's income to reserves.

The Bank's authorized capital was ₩30 billion when the Government enacted the KEXIM Act in 1969. The National Assembly amended the KEXIM Act and increased the Bank's authorized capital to ₩150 billion in 1974, ₩500 billion in 1977, ₩1,000 billion in 1986, ₩2,000 billion in January 1998, ₩4,000 billion in September 1998 and ₩8,000 billion in January 2009. In January 2014, the Government further increased the Bank's authorized capital to ₩15,000 billion.

As of December 31, 1996, the capital contribution from the Government was approximately ₩686 billion, all in cash. Since 1997, the Government has made capital contributions not only in cash but also in the form of shares of common stock of Government-affiliated entities. Recent examples include the Government's contributions to the Bank's capital of (i) ₩130 billion, ₩40 billion, ₩75 billion, ₩15 billion, ₩10 billion, ₩935 billion, ₩10 billion and ₩65 billion in cash in January 2014, January 2015, August 2015, September 2015, July 2016, September 2016, October 2016 and November 2016, respectively, and (ii) ₩380 billion and ₩1,000 billion in the form of shares of Korea Land & Housing Corporation in July 2014 and December 2015, respectively, ₩500 billion in the form of shares of Korea Aerospace Industries Ltd. in June 2016, ₩125 billion in the form of shares of Yeosu Gwangyang Port Authority in May 2017, ₩125 billion in the form of shares of Incheon Port Authority in May 2017 and ₩1,167 billion in the form of shares of Korea Aerospace Industries Ltd. in June 2017, in order to enhance the Bank's capacity to finance projects, including large-scale overseas development projects. Taking into account these capital contributions, the Bank's total capital stock was ₩11,815 billion as of December 31, 2017.

Pursuant to the KEXIM Act, only the Government, The Korea Development Bank, The Bank of Korea, certain designated domestic banking institutions, exporters' associations and international financial organizations may contribute to the Bank's capital stock. As of December 31, 2017, the Government directly owned 66% of the Bank's capital stock and indirectly owned, through The Bank of Korea and The Korea Development Bank, 10% and 24%, respectively, of the Bank's capital stock. See Note 1 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

In addition to contributions to the Bank's capital, the Government provides funding for the Bank's financing activities. The Government has made loans available to the Bank for its lending activities. See "—Description of Assets and Liabilities—Sources of Funding."

The Government also supports the Bank's operation pursuant to Articles 36 and 37 of the KEXIM Act. Article 36 of the KEXIM Act and the By-laws provide that the Bank shall apply its net income earned during each fiscal year, after deduction of depreciation expense for such fiscal year, in the following manner and in order of priority:

- first, at least 10% of such net income is transferred to the Bank's legal reserve until the total amount of the Bank's legal reserve equals the total amount of the Bank's capital stock;
- second, if the Minister of Economy and Finance approves such distribution, the balance of any such net income, after such transfer to the legal reserve, is distributed to the institutions, other than the Government, that have contributed to the Bank's capital (up to a maximum 15% annual dividend rate); and
- third, the remaining balance of any such net income is distributed in whatever manner the Bank's Operations Committee determines and the Minister of Economy and Finance approves, such as additions to the Bank's voluntary reserve.

Article 37 of the KEXIM Act provides that "the annual net losses of the Export-Import Bank of Korea shall be offset each year by the reserve, and if the reserve be insufficient, the Government shall provide funds to cover the deficit." As a result of the KEXIM 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 reserves are insufficient to cover any of the Bank's annual net losses. In light of this provision, if the Bank has insufficient funds to make any payment under any of the Bank's obligations, the Government would take appropriate steps 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 37 do not, however, constitute a direct guarantee by the Government of the Bank's obligations, and the provisions of the KEXIM Act, including Article 37, may be amended at any time by action of the National Assembly.

The Government closely supervises the Bank's operations including in the following ways:

- the President of the Republic appoints the Bank's President upon the recommendation of the Minister of Economy and Finance;
- the Minister of Economy and Finance appoints the Bank's Deputy President and Senior Executive Directors upon the recommendation of the Bank's President;
- the Minister of Economy and Finance appoints the Bank's Auditor;
- one month prior to the beginning of each fiscal year, the Bank must submit its proposed program of operations and budget for the fiscal year to the Minister of Economy and Finance for his approval and immediately after the approval of the Minister of Economy and Finance, the Bank must report such program to the National Assembly;
- the Minister of Economy and Finance must approve the Bank's operating manual, which sets out guidelines for all principal operating matters, including the range of permitted financings;
- the Board of Audit and Inspection, a Government department, examines the Bank's settlement of accounts annually;
- each of the Minister of Economy and Finance and the Financial Services Commission has broad authority to require reports from the Bank on any matter and to examine its books, records and other documents. On the basis of the reports and examinations, the Minister of Economy and Finance may issue any orders it deems necessary to enforce the KEXIM Act or delegate examinations to the Financial Services Commission;

- the Financial Services Commission may supervise the Bank's operations to ensure managerial soundness based upon the KEXIM Decree and the Supervisory Regulations of Banking Business legislated by the Financial Services Commission and may issue orders deemed necessary for such supervision;

- the Bank must submit its annual report to the Ministry of Economy and Finance within two months after the end of each fiscal year and to the National Assembly within nine months after the end of each fiscal year outlining the Bank's operations and analyzing the Bank's activities during the relevant fiscal year; and

- the Bank may amend its By-laws and operating manual only with the approval of the Minister of Economy and Finance.

Selected Financial Statement Data

Except where expressly indicated otherwise in this Offering Circular, loans in Won and loans in foreign currencies are collectively referred to as the "Loans"; bills bought, foreign exchange bought, advances for customers, call loans and interbank loans in foreign currency are collectively referred to as the "Other Loans"; Loans and Other Loans are collectively referred to as the "Loan Credits"; confirmed guarantees and acceptances are collectively referred to as the "Guarantees"; and Loan Credits and Guarantees are collectively referred to as the "Credit Exposure."

Recent Developments

As of June 30, 2018, the Bank had ₩73,109 billion of outstanding loans, including ₩40,047 billion of outstanding export credits, ₩26,964 billion of outstanding overseas investment credits and ₩3,958 billion of outstanding import credits, as compared to ₩71,884 billion of outstanding loans, including ₩41,369 billion of outstanding export credits, ₩24,107 billion of outstanding overseas investment credits and ₩3,726 billion of outstanding import credits as of December 31, 2017.

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 unaudited separate financial statements as of and for the six months ended June 30, 2018 included in this Offering Circular. As permitted by the transition rules of K-IFRS 1109, the Bank's comparative unaudited separate financial statements as of December 31, 2017 and for the six months ended June 30, 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 unaudited separate financial statements as of and for the six months ended June 30, 2018. For information regarding the impact of the application of K-IFRS 1109 to the Bank's separate financial statements, see Note 38 of the notes to the Bank's unaudited separate financial statements as of June 30, 2018 and for the six months ended June 30, 2018 and 2017 included in this Offering Circular.

You should read the following financial statement data together with the Bank's unaudited separate financial statements and notes included in this Offering Circular. The following tables present selected unaudited separate financial information for the six months ended June 30, 2018 and 2017 and as of June 30, 2018 and December 31, 2017, which has been derived from the Bank's unaudited separate financial statements as of June 30, 2018 and for the six months ended June 30, 2018 and 2017 included in this Offering Circular:

	Six Months Ended June 30,	
	2018[(1)]	2017
	(billions of Won) (unaudited)	
Income Statement Data		
Total Interest Income.	₩ 1,336	₩ 1,303
Total Interest Expense.	894	785
Net Interest Income	442	518
Operating Income	709	579
Income before Income Tax	723	582
Income Tax Expense.	164	137
Net Income	559	445

	As of June 30, 2018[(1)] (unaudited)	As of December 31, 2017
	(billions of Won)	
Balance Sheet Data		
Total Loan Credits[(2)]	₩ 73,109	₩ 71,884
Total Borrowings[(3)]	70,910	66,699
Total Assets	90,429	83,946
Total Liabilities	77,298	71,433
Total Shareholders' Equity	13,131	12,513

(1) Reflects the application of K-IFRS 1109. For information regarding the impact of the application of K-IFRS 1109, see Note 38 of the notes to the Bank's unaudited separate financial statements as of June 30, 2018 and for the six months ended June 30, 2018 and 2017 included in this Offering Circular.
(2) Gross amount, which includes bills bought, foreign exchange bought, call loans, inter-bank loans in foreign currency and others without adjusting for valuation adjustment of loans in foreign currencies, deferred loan origination fees or allowance for loan losses.
(3) Includes debentures.

Selected Financial Statement Data as of and for the years ended December 31, 2016 and 2017

You should read the following financial statement data together with the Bank's separate financial statements and notes included in this Offering Circular. The following tables present selected separate financial information as of and for the years ended December 31, 2016 and 2017, which has been derived from the Bank's separate financial statements as of and for the years ended December 31, 2016 and 2017 included in this Offering Circular.

	Year Ended December 31,	
	2016	2017
	(billions of Won)	
Income Statement Data		
Total Interest Income	₩ 2,231	₩ 2,684
Total Interest Expense	1,417	1,604
Net Interest Income	815	1,080
Operating Income (Loss)	(1,958)	229
Income (Loss) before Income Tax	(1,958)	229
Income Tax Expense (Benefit)	(471)	56
Net Income (Loss)	(1,487)	173

	As of December 31,	
	2016	2017
	(billions of Won)	
Balance Sheet Data		
Total Loan Credits (1)	₩ 76,724	₩ 71,884
Total Borrowings (2)	71,880	66,699
Total Assets	89,775	83,946
Total Liabilities	78,555	71,433
Total Shareholders' Equity	11,220	12,513

(1) Gross amount, including bills bought, foreign exchange bought, call loans, inter-bank loans in foreign currency, advance for customers and others and before deducting valuation adjustment of loans in foreign currencies, allowance for loan losses and deferred loan origination fees. See Note 10 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

(2) Includes debentures.

2017

The Bank had net income of ₩173 billion in 2017 compared to net loss of ₩1,487 billion in 2016. The principal factors for the net income of ₩173 billion in 2017 compared to the net loss of ₩1,487 billion in 2016 included:

- reversal of impairment loss on guarantees of ₩879 billion in 2017 compared to impairment loss on guarantees of ₩1,165 billion in 2016, primarily due to a decrease in refund guarantees to shipbuilding companies, which resulted in an improvement in guarantee quality; and
- an increase in net interest income to ₩1,080 billion in 2017 from ₩815 billion in 2016, primarily due to an increase in interest income from loans which more than offset an increase in interest expense from debentures.

The above factors were partially offset by income tax expense of ₩56 billion in 2017 compared to income tax benefit of ₩471 billion in 2016, primarily due to income before income tax of ₩229 billion in 2017 compared to loss before income tax of ₩1,958 billion in 2016.

As of December 31, 2017, the Bank's total assets decreased by 6% to ₩83,946 billion from ₩89,775 billion as of December 31, 2016, primarily due to a 6% decrease in Loan Credits to ₩71,884 billion as of December 31, 2017 from ₩76,724 billion as of December 31, 2016.

As of December 31, 2017, the Bank's total liabilities decreased by 9% to ₩71,433 billion from ₩78,555 billion as of December 31, 2016, primarily due to a 38% decrease in borrowings to ₩6,013 billion as of December 31, 2017 from ₩9,761 billion as of December 31, 2016 and a 2% decrease in debentures to ₩60,685 billion as of December 31, 2017 from ₩62,119 billion as of December 31, 2016.

The decreases in assets and liabilities were primarily due to the appreciation of the Won against the U.S. dollar as of December 31, 2017 compared to December 31, 2016, as a majority of the Bank's assets and liabilities consisted of foreign currency loans and debt (including significant percentages in U.S. dollars). The decreases in the volume of loans and debt magnified the effect of the appreciation of the Won against the U.S. dollar.

As of December 31, 2017, the Bank's total shareholders' equity increased by 12% to ₩12,513 billion from ₩11,220 billion as of December 31, 2016, primarily due to an increase in capital stock.

2016

In 2016, the Bank had net loss of ₩1,487 billion compared to net income of ₩22 billion in 2015. The principal factors for the net loss of ₩1,487 billion in 2016 compared to the net income of ₩22 billion in 2015 included:

- an increase in impairment loss on loans to ₩1,929 billion in 2016 from ₩836 billion in 2015, primarily due to a downgrade of the classification of the Bank's exposure to (i) Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("DSME") from normal to precautionary, following the Bank's evaluation of DSME's financial condition (including a significant increase in its liabilities) and operating results (including a significant operating loss) and (ii) STX Offshore & Shipbuilding Co., Ltd. from substandard to estimated loss, following its filing for court receivership in June 2016; and

- an increase in impairment loss on guarantees to ₩1,165 billion in 2016 from ₩122 billion in 2015, primarily due to a deterioration in credit quality with respect to guarantees extended to certain borrowers (including DSME and STX Offshore & Shipbuilding).

The above factors were partially offset by an income tax benefit of ₩471 billion in 2016 compared to an income tax expense of ₩13 billion in 2015, primarily due to loss before income tax of ₩1,958 billion in 2016.

As of December 31, 2016, the Bank's total assets increased to ₩89,775 billion from ₩81,890 billion as of December 31, 2015, primarily due to an increase in Loan Credits to ₩76,724 billion as of December 31, 2016 from ₩69,412 billion as of December 31, 2015.

As of December 31, 2016, the Bank's total liabilities increased to ₩78,555 billion from ₩70,864 billion as of December 31, 2015, primarily due to an increase in debentures to ₩62,119 billion as of December 31, 2016 from ₩53,240 billion as of December 31, 2015, which more than offset a decrease in borrowings to ₩9,761 billion as of December 31, 2016 from ₩11,958 billion as of December 31, 2015.

The increases in assets and liabilities were primarily due to increases in the volume of loans and debt, respectively. The depreciation of the Won against the U.S. dollar as of December 31, 2016 compared to December 31, 2015 magnified the effect of the increase in the volume of loans and debt, as a majority of the Bank's assets and liabilities consisted of foreign currency loans and debt (including significant percentages in U.S. dollars).

As of December 31, 2016, the Bank's total shareholders' equity increased to ₩11,220 billion from ₩11,026 billion as of December 31, 2015, primarily due to an increase in capital stock to ₩10,398 billion as of December 31, 2016 from ₩8,878 billion as of December 31, 2015 and an increase in unrealized gains on available-for-sale securities to ₩260 billion as of December 31, 2016 from ₩116 billion as of December 31, 2015, which more than offset a decrease in retained earnings to ₩535 billion as of December 31, 2016 from ₩2,028 billion as of December 31, 2015.

Operations

Loan Operations

The Bank's primary objective since its establishment has been to promote the export and competitiveness of Korean goods and services in international markets. To this end, the Bank has introduced various financing facilities and implemented lending policies that are responsive to the needs of Korean exporters and foreign importers. Over the years, the Bank has also developed financing facilities and lending policies that are consistent with the Government's overall economic policies. In the latter part of the 1980s, as a result of changing trade conditions and the increased internationalization of the Korean economy, overseas investment credits and import credits were promoted and began to constitute an important portion of the Bank's business. The Bank's lending programs include (1) export credits to Korean exporters or foreign buyers of Korean goods and services, (2) overseas investment credits to Korean firms and (3) import credits to Korean importers.

Before approving a credit, the Bank considers:

- economic benefits to the Republic;
- the industry's rank in the order of priorities established by the Government's export-import policy;
- credit risk associated with the loans to be extended; and
- the goal of diversifying the Bank's lending activities.

The KEXIM Act and the By-laws provide that the Bank may extend credit only where repayment "is considered probable." Accordingly, the Bank carefully investigates the financial position of each prospective borrower and the technical and financial aspects of the project to be financed, and a loan is made only if the Bank believes there is reasonable assurance of repayment. See "—Credit Policies, Credit Approval and Risk Management—Credit Approval."

In 2017, the Bank provided Loans of ₩51,360 billion, a decrease of 10% from the previous year, but the Bank's commitments of Loans amounted to ₩50,316 billion, an increase of 1% from the previous year. The decrease in disbursements for Loans was primarily attributable to disbursements made in 2017 based on decreased commitments the Bank approved in 2016. The increase in commitments of Loans was primarily due to an increase in new commitments for export credits and import credits.

The following table sets out the total amounts of the Bank's outstanding Loan Credits, categorized by type of credit:

	As of December 31,			As % of 2017 Total
	2015	2016	2017	
	(billions of Won)			
Export Credits				
Industrial Plants	₩ 15,299	₩ 17,105	₩ 15,082	21%
Shipbuilding	12,748	14,328	14,855	21
Ferrous & nonferrous metal products	2,088	1,971	1,738	2
Petrochemical products	1,505	1,462	1,577	2
Automobiles	1,221	1,732	1,945	3
Electronic machineries	1,045	1,682	2,048	3
Others (1)	4,290	4,348	4,124	6
Sub-total	38,196	42,628	41,369	58
Overseas Investment Credits	25,641	27,527	24,107	34
Import Credits	3,783	3,741	3,726	5
Call Loans	902	2,765	2,056	3
Others (2)	844	541	1,925	3
Present Value Premium/Discount	46	(478)	(1,297)	(2)
Total Loan Credits	₩ 69,412	₩ 76,724	₩ 71,884	100%

(1) Includes general machinery, service sector, etc.
(2) Includes Inter-bank loans in foreign currency, advances for customers, etc.
Source: Internal accounting records

The following table sets out the Bank's new loan commitments, categorized by type of credit:

New Loan Credit Commitments by Type of Credit

	As of December 31,			As % of 2017 Total
	2015	2016	2017	
	(billions of Won)			
Export Credits				
Industrial Plants	₩ 6,566	₩ 3,227	₩ 5,051	10%
Shipbuilding	7,889	7,703	7,352	15
Ferrous & nonferrous metal products	2,090	1,327	1,352	3
Petrochemical products	4,782	3,822	4,206	8
Automobiles	2,677	3,494	3,535	7
Electronic machineries	1,834	1,843	2,108	4
Others (1)	7,456	8,901	7,446	15
Sub-total	33,294	30,317	31,050	62
Overseas Investment Credits	14,359	13,369	12,361	25
Import Credits	7,406	6,221	6,905	14
Total	₩ 55,060	₩ 49,907	₩ 50,316	100%

(1) Includes general machinery, service sector, etc.
Source: Internal accounting records

Export Credits

The Bank offers export credits to either domestic suppliers or foreign buyers to finance export transactions.

Export Credits to domestic suppliers include:

- export loans to Korean exporters that export capital goods such as ships, industrial plants and machinery;
- pre-shipment credit to Korean exporters or manufacturers producing export products;
- technical service credit to Korean companies that export technical services abroad, including overseas construction projects;
- short-term trade financing to Korean exporters that manufacture export goods under short-term export contracts;
- small business export credit to small and medium-sized enterprises that manufacture export goods or supply materials needed by their primary exporters;
- rediscount on trade bills to domestic commercial banks for exporters;
- forfaiting to Korean exporters by discounting trade bills under the usance line of credit from export transactions on a non-recourse basis; and
- export factoring to Korean exporters by discounting trade receivables that occurs from open account export transactions on credit on a non-recourse basis.

Export credits to foreign buyers include:

- direct loans to foreign buyers that purchase Korean goods and services;

- project finance to foreign companies that intend to import industrial plants, facilities and technical services from Korea for large-scale projects, of which the cash flows from such projects are the main source for repayment;

- structured finance to foreign shipping companies that purchase ships from Korean shipyards, of which the repayment usually depends on the cash flows generated by the operation of ships; and

- interbank export loans to creditworthy banks in foreign countries to help foreign buyers obtain credit for the purchase of goods and services of Korean origin.

As of December 31, 2017, export credits in the amount of ₩41,369 billion represented 58% of the Bank's total outstanding Loan Credits. The Bank's disbursements of export credits in 2017 amounted to ₩32,938 billion, a decrease of 8% from the previous year, primarily due to decreased activity for construction of industrial plants. The Bank's commitments of export credits in 2017 amounted to ₩31,050 billion, an increase of 2% from the previous year.

The Bank offers export credits to Korean companies in order to provide them with the funds required for the manufacture or construction of capital and non-capital goods and readying of technical services designated in the Bank's operating manual for export. Capital goods eligible for export credit financings currently include ships, industrial plants, industrial machinery and overseas construction projects. With respect to eligible items supported by the Bank's export credits, ships have traditionally had the largest share of the Bank's export credit operations.

The Bank offers export loans and technical service credits to domestic suppliers at fixed (no less than the Commercial Interest Reference Rate under the OECD Arrangement (as defined below)) or floating rates of interest with maturities of up to 12 years for ships and maturities of varying terms, from two to 18 years, for financings of other eligible items. The Bank typically requires a minimum down payment of 20% of the contract amount for ship export financings and a minimum down payment of 15% for financings of other eligible items. When the credit rating of a prospective borrower does not meet the Bank's internal rating criteria, these export credits are secured by promissory notes issued in connection with the relevant transaction, or letters of guarantees or letters of credit issued or confirmed by a creditworthy international bank or the importer's government or central bank. Other terms and conditions under such export credit facilities must be in accordance with the Arrangement on Guidelines for Officially Supported Export Credits by the Organization for Economic Cooperation and Development (the "OECD Arrangement"). The Bank offers direct loans to foreign buyers, project finance to project companies and structured finance for ships to foreign shipping companies under similar terms and conditions as export credit financings to domestic suppliers. The Bank offers interbank export loans to overseas banks to facilitate imports by foreign importers of Korean manufactured goods. Interbank export loans are offered at fixed or floating rates of interest with maturities of up to ten years.

Overseas Investment Credits

The Bank extends overseas investment credits to either Korean companies or foreign companies in which a Korean company has an equity share, to finance investments in eligible overseas businesses and projects. Such financing programs include:

- overseas investment credit to Korean companies that invest abroad in the form of capital subscription, acquisition of stocks and long-term credit;

- overseas project credit to Korean companies or their overseas subsidiaries engaging in businesses outside Korea;

- major resources development credit to Korean companies for development of natural resources and acquisition of mining rights abroad; and
- overseas business credit to foreign companies in which Korean companies have an equity stake, in the form of funds for purchasing equipment or working capital.

As of December 31, 2017, overseas investment credits amounted to ₩24,107 billion, representing 34% of the Bank's total outstanding Loan Credits. The Bank's commitments of overseas investment credits in 2017 amounted to ₩12,361 billion, a decrease of 8% from the previous year. The Bank's disbursements of overseas investment credits in 2017 amounted to ₩11,504 billion, a decrease of 22% from the previous year. The decrease in new commitments and disbursements for overseas investment credits was primarily due to decreased demand for overseas investment and project credits.

Proposals for overseas investment credits to finance the acquisition of important materials or the development of natural resources for the Korean economy, as determined by the Government, are given priority, together with projects that promote the export of Korean goods and services. As a result, projects financed by the Bank's overseas investment credit program have been mainly in the fields of manufacturing or development of natural resources.

The Bank offers overseas investment credits at either fixed or floating rates of interest with maturities up to 30 years. Such facilities may require security in the form of a bank guarantee, pledge or mortgage on the borrower's local assets. Depending upon the size of the borrower, the Bank will provide up to 100% of the financing required for the overseas investment project.

Import Credits

The Bank offers import credits to Korean companies that directly import essential materials, natural resources and high-technology materials whose stable and timely supply is required for the national economy, or to Korean companies that import such items after developing them overseas. Import credits are extended for importation of eligible items, including nuclear fuels, aircraft, mineral ores, crude oil, lumber, wood pulp, grains, cotton, sugar, and equipment and machinery for research and development, and for use in advanced technological industries.

As of December 31, 2017, import credits in the amount of ₩3,726 billion represented 5% of the Bank's total outstanding Loan Credits. Disbursements and new commitments of import credits amounted to ₩6,918 billion and ₩6,905 billion, respectively, in 2017, an increase of 10% and 11%, respectively, from the previous year, primarily due to an increase in demand for financing for raw materials used for export and domestic consumption.

The Bank offers import credits at either fixed or floating rates of interest with maturities up to ten years for equipment and machinery and shorter maturities of up to two years for other items, which may require security in the form of a bank guarantee, pledge or mortgage on the borrower's local assets. The Bank generally provides up to 80% of the import contract amount, but provide up to 90% of the import contract amount in the case of small and medium-sized enterprises and up to 100% for transactions with a letter of credit opened by a bank.

Guarantee Operations

The Bank provides guarantees in favor of Korean commercial banks and foreign banks or foreign importers in respect of the obligations of Korean exporters in order to facilitate export and import financings. Such guarantee programs for Korean exporters and importers include (1) financial guarantees to co-financing banks that provide loans for transactions that satisfy the Bank's eligibility requirements and (2) project-related guarantees to foreign importers for the performance of Korean exporters on eligible projects in the form of bid bonds, advance payment bonds, performance bonds and retention bonds. Guarantee commitments as of December 31, 2017 decreased to ₩42,809 billion from ₩59,679 billion as of December 31, 2016. Guarantees the Bank had confirmed as of December 31, 2017 decreased to ₩38,961 billion from ₩53,615 billion as of December 31, 2016.

The Bank mainly issues project-related guarantees, which include:

- advance payment guarantees that are issued to overseas importers of Korean goods and services to support obligations to refund down payments made to Korean exporters in the event of a failure to deliver the goods to be exported; and

- performance guarantees that are issued to foreign importers to support the performance by Korean exporters of their contractual obligations.

In 2017, the Bank issued project-related confirmed guarantees in the amount of ₩6,052 billion, a decrease of 31% from the previous year.

The Bank also issues letters of credit to foreign exporters to assist in the financing of projects approved in connection with import credit loans, and to Korean exporters to assist in the financing of projects approved in connection with export credit loans.

For further information regarding the Bank's guarantee and letter of credit operations, see Note 36 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

Government Account Operations

Economic Development Cooperation Fund

In 1987, the Government established the Economic Development Cooperation Fund (the "EDCF") to provide loans, at concessional interest rates, to governments or agencies of developing countries for projects that contribute to industrial development or economic stabilization of such countries. The Bank administers the EDCF on behalf of the Government and are responsible for project appraisal, documentation and administrative work relating to the EDCF Loans. The EDCF business accounts are maintained separately from the Bank's own account on behalf of the Government, and the Bank derives no separate income or expenditures from the Bank's operation of the EDCF business. Government contributions constitute the primary funding source of the EDCF. Loan disbursements by the EDCF in 2017 amounted to ₩749 billion for 101 projects in 32 countries, an increase of 0.4% from the previous year. As of December 31, 2017, the total outstanding loans extended by the EDCF was ₩6,308 billion, an increase of 11% from the previous year.

Inter-Korea Cooperation Fund

In 1991, the Government established the Inter-Korea Cooperation Fund (the "IKCF") to promote mutual exchanges and cooperation between the Republic and North Korea by engaging in funding and financing activities to support family reunions, cultural events, academic seminars, trade and economic cooperation between the two countries. The Bank administers the IKCF under the initiative and policy coordination of the Ministry of Unification. The IKCF accounts are maintained separately from the Bank's own account on behalf of the Government. Government contributions are the major funding source of the IKCF. The IKCF disbursements during 2017 amounted to ₩68 billion for 223 projects, and cumulative total disbursements as of December 31, 2017 were ₩6,745 billion, an increase of 1% from ₩6,677 billion as of December 31, 2016.

Other Operations

The Bank engages in various other activities related to the Bank's financing activities.

Activities in which the Bank currently engages include:

- country information services performed by the Overseas Economic Research Institute, which conducts country studies and country risk evaluation to assist in the efficient utilization of the Bank's financial resources;
- export credit advisory services, which are aimed at bringing about a larger share of overseas bidding by giving Korean exporters a wide range of knowledge on the country, industry, market and financial situation of the importing country in the early stage of the tendering process or contract negotiations;
- consulting services by in-house professionals including lawyers, accountants and regional experts who consult on international transactions; and
- management of Korea's foreign direct investment database.

Description of Assets and Liabilities

Total Credit Exposure

The Bank extends credits to support export and import transactions, overseas investment projects and other relevant products in various forms including loans and guarantees.

The following table sets out the Bank's Credit Exposure as of December 31, 2015, 2016 and 2017, categorized by type of exposure extended:

		As of December 31,					
		2015		2016		2017	
		(billions of Won, except for percentages)					
A	Loans in Won	₩ 14,953	12%	₩ 16,178	13%	₩ 18,956	18%
B	Loans in Foreign Currencies	51,385	41	55,523	44	47,873	45
C	**Loans (A+B)**	66,338	53	71,701	56	66,829	62
D	Other Loans	3,074	2	5,023	4	5,056	5
E	**Loan Credits (C+D)**	69,412	56	76,724	60	71,884	67
F	Allowances for Loan Losses	(2,405)	(2)	(2,926)	(2)	(3,287)	(3)
G	**Loan Credits including present value discounts (E-F)**	67,007	54	73,798	58	68,597	64
H	Guarantees	57,096	46	53,615	42	38,961	36
I	**Credit Exposure (G+H)**	124,103	100	127,413	100	107,558	100

Loan Credits by Geographic Area

The following table sets out the total amount of the Bank's outstanding Loan Credits as of December 31, 2015, 2016 and 2017, categorized by geographic area (1):

	As of December 31, (1)			As % of 2017 Total
	2015	2016	2017	
	(billions of Won)			
Asia (2)	₩50,272	₩56,012	₩54,219	75%
Europe	5,258	5,463	4,334	6
America	9,722	11,190	9,229	13
Africa	4,161	4,059	4,102	6
Total	₩69,412	₩76,724	₩71,884	100%

(1) For purposes of this table, export credits have been allocated to the geographic areas in which the foreign buyers of Korean exports are located; overseas investment credits have been allocated to the geographic areas in which the overseas investments being financed are located; and import credits have been allocated to the geographic areas in which the sellers of the imported goods are located.
(2) Includes Australia.

Source: Internal accounting records

The Bank engages in business related to Iran, including transactions involving as counterparties Iranian banks that may be indirectly owned or controlled by the Iranian government. The U.S. State Department has designated Iran as a state sponsor of terrorism, and U.S. law generally prohibits U.S. persons from doing business in Iran. The Bank is a Korean bank and its activities with respect to Iran have not involved any U.S. person in either a managerial or operational role and have been subject to policies and procedures designed to ensure compliance with Korean and applicable foreign and international laws and regulations, including any secondary sanctions. The Bank believes that its activities related to Iran are not subject to the mandatory sanctions administered or enforced by the United States Government (including, without limitation, Section 104 of the U.S. Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 ("CISADA") and the Iran Financial Sanctions Regulations issued by the U.S. Secretary of the Treasury thereunder (the "IFSR")).

The Bank's business related to Iran consists solely of extensions of credit and financing provided in connection with exports of Korean goods and services to Iran and the Bank's disbursements of Iran-related credits are made directly to Korean suppliers or exporters except certain credits made to Iranian banks. Such activities have involved export-related credits to finance the export contracts of Korean exporters supplying goods and services to Iranian companies, credit line extensions to Iranian banks to finance consumer products exports by Korean exporters, extensions of credit through non-recourse discounting of export trade bills, and purchases of promissory notes securing export transactions. The Bank's Loans to Iran represented 0.1%, 0.3% and 0.5% of the Bank's total assets as of December 31, 2015, 2016 and 2017, respectively, and also represented 0.1%, 0.3% and 0.7% of the Bank's Loan Credits as of those respective dates. The Bank's total operating revenues from transactions with Iran in 2015, 2016 and 2017 represented 0.3%, 0.3% and 0.3% of the Bank's total operating revenues, respectively.

The Bank is aware, through press reports and other means, of initiatives by governmental entities in the U.S. and by U.S. institutions such as universities and pension funds, to adopt laws, regulations or policies prohibiting transactions with or investment in, or requiring divestment from, entities doing business with Iran. It is possible that such initiatives may result in the Bank's being unable to gain or retain entities subject to such prohibitions as customers or as investors in the Bank's debt securities. In addition, the Bank's reputation may suffer due to the Bank's association with Iran. Such a result could have significant adverse effects on the Bank's business or the price of the Bank's debt securities.

Individual Exposure

The KEXIM Decree imposes limits on the Bank's aggregate credits extended to a single person or business group. As of the date hereof, the Bank is in compliance with such requirements.

As of December 31, 2017, the Bank's largest Credit Exposure was to Daewoo Shipbuilding & Marine Engineering, or DSME, in the amount of ₩8,065 billion. As of December 31, 2017, the Bank's second largest and third largest Credit Exposures, respectively, were to Hyundai Heavy Industries Co., Ltd. in the amount of ₩3,393 billion and to Samsung Heavy Industries Co., Ltd. in the amount of ₩3,183 billion.

The following table sets out the Bank's five largest Credit Exposures as of December 31, 2017 (1):

Rank	Name of Borrower	Loan Credits	Guarantees	Total
			(billions of Won)	
1	Daewoo Shipbuilding & Marine Engineering Co., Ltd.	₩ 3,189	₩ 4,876	₩ 8,065
2	Hyundai Heavy Industries Co., Ltd.	1,584	1,809	3,393
3	Samsung Heavy Industries Co., Ltd.	939	2,244	3,183
4	Hanwha Engineering & Construction Co., Ltd.	-	2,434	2,434
5	Doosan Heavy Industries Co., Ltd.	900	1,497	2,397

(1) Excludes loans and guarantees extended to affiliates.
Source: Internal accounting records.

In recent years, 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 Korea Development Bank, plan to provide financial support to DSME, including provision of liquidity support of up to ₩4.2 trillion. In December 2016, in a bid to improve DSME's capital structure, the Bank exchanged a term loan in the amount of ₩1 trillion provided by the Bank to DSME for perpetual bonds newly issued by DSME, while The Korea Development Bank engaged in debt-for-equity swaps amounting to ₩1.8 trillion. In March 2017, the Bank and The Korea Development Bank 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 exchanged a term loan in the amount of ₩1.28 trillion provided by the Bank to DSME for perpetual bonds issued by DSME and The Korea Development Bank provided additional debt-to-equity swaps of ₩0.3 trillion in June 2017. Other creditors also provided debt-to-equity swaps for up to 80% of their debt with DSME and rescheduled the maturities of the remainder.

In addition, the Bank has Credit Exposures to a number of financially troubled Korean companies including STX Offshore & Shipbuilding and Sungdong Shipbuilding & Marine Engineering Co., Ltd. STX Offshore & Shipbuilding, which had filed for court receivership in June 2016 and executed debt-for-equity swaps with their creditors (including the Bank), exited court receivership in July 2017. Sungdong Shipbuilding & Marine Engineering, which had been in voluntary out-of-court debt restructuring since 2010, filed for court receivership in March 2018.

As of December 31, 2017, the Bank's Credit Exposure to STX Offshore & Shipbuilding and Sungdong Shipbuilding & Marine Engineering amounted to ₩407 billion and ₩2,072 billion, respectively.

Asset Quality

The Supervisory Regulation of Banking Business ("Supervisory Regulation") legislated by the Financial Services Commission requires banks, including the Bank, to analyze and classify their credits into one of five categories as normal, precautionary, substandard, doubtful or estimated loss by taking into account borrowers' repayment capacity as well as a number of other factors including the financial position, profitability, transaction history of the relevant borrower and the value of any collateral or guarantee taken as security for the extension of credit. Categorizations are applied to all loans except call loans and interbank loans, which are classified as normal. Credit categorizations are as follows:

Normal . . . . Credits extended to customers which, in consideration of their business and operations, financial conditions and future cash flows, do not raise concerns regarding their ability to repay the credits.

Precautionary . . . . Credits extended to customers (1) which, in consideration of their business and operations, financial conditions and future cash flows, are judged to have potential risks with respect to their ability to repay the credits in the future, although there have not occurred any immediate risks of default in repayment; or (2) which are in arrears for one month or more but less than three months.

Substandard . . . . . (1) Credits extended to customers, which in consideration of their business and operations, financial conditions and future cash flows, are judged to have incurred considerable risks for default in repayment as the customers' ability to repay has deteriorated; or (2) that portion which is expected to be collected of total credits (a) extended to customers which have been in arrears for three months or more, (b) extended to customers which are judged to have incurred serious risks due to the occurrence of final refusal to pay their promissory notes, liquidation or bankruptcy proceedings, or closure of their businesses or (c) of "Doubtful Customers" or "Estimated-loss Customers" (each as defined below).

Doubtful . . . . That portion of credits in excess of the amount expected to be collected of total credits extended to (1) customers ("Doubtful Customers") which, in consideration of their business and operations, financial conditions and future cash flows, are judged to have incurred serious risks of default in repayment due to noticeable deterioration in their ability to repay; or (2) customers which have been in arrears for three months or more but less than twelve months.

Estimated Loss . . . That portion of credits in excess of the amount expected to be collected of total credits extended to (1) customers ("Estimated-loss Customers"), which, in consideration of their business and operations, financial conditions and future cash flows, are judged to have to be accounted as a loss as the inability to repay became certain due to serious deterioration in their ability to repay; (2) customers which have been in arrears for twelve months or more; or (3) customers which are judged to have incurred serious risks of default in repayment due to the occurrence of final refusal to pay their promissory notes, liquidation or bankruptcy proceedings, or closure of their businesses.

Under K-IFRS, the Bank establishes provisions for credit losses with respect to loans using either a case-by-case or collective approach. The Bank assesses individually significant loans on a case-by-case basis and other loans on a collective basis. In addition, if the Bank determines that no objective evidence of impairment exists for a loan, it includes such loan in a group of loans with similar credit risk characteristics and assesses them collectively for impairment regardless of whether such loan is significant. If there is objective evidence that an impairment loss has been incurred for individually significant loans, the amount of the loss is measured as the difference between the financial asset's carrying amount and the present value of the estimated future cash flows discounted at such asset's original effective interest rate. Future cash flows are estimated through a case-by-case analysis of individually assessed assets, which takes into account the benefit of any guarantee or other collateral held. The value and timing of future cash flow receipts are based on available estimates in conjunction with facts available at the time of review and reassessed on a periodic basis as new information becomes available. For collectively assessed loans, the Bank bases the level of provisions for credit losses on a portfolio basis in light of the homogenous nature of the assets included in each portfolio. The provisions are determined based on a quantitative review of the relevant portfolio, taking into account such factors as the level of arrears, the value of any security, and historical and projected cash recovery trends over the recovery period. For more detailed information regarding the Bank's loan loss provisioning policy, see Note 3(14) of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

Asset Classifications

The following table provides information on the Bank's loan loss reserves:

	As of December 31, 2015		As of December 31, 2016		As of December 31, 2017	
	Loan Amount (1) (2)	Loan Loss Reserve (2)	Loan Amount (1) (2)	Loan Loss Reserve (2)	Loan Amount (1) (2)	Loan Loss Reserve (2)
	(billions of Won)					
Normal	₩ 118,708	₩ 449	₩ 110,589	₩ 343	₩ 95,222	₩ 270
Precautionary	2,007	297	11,145	1,219	9,007	790
Sub-standard	2,169	888	2,573	757	592	166
Doubtful	1,658	943	1,617	1,041	2,075	1,732
Estimated Loss	210	207	1,588	1,080	1,267	1,207
Total	₩ 124,752	₩ 2,783	₩ 127,512	₩ 4,439	₩ 108,163	₩ 4,165

(1) These figures include loans (excluding interbank loans and call loans), domestic usance bills, bills bought, notes bought, advances for customers, confirmed acceptances and guarantees.
(2) These figures exclude the regulatory reserve for loans and guarantees.

Reserves for Credit Losses

Non-performing assets ("NPA") are defined as assets that are classified as substandard or below.

The following table sets out the Bank's 10 largest non-performing assets as of December 31, 2017:

Borrower	Loans	Guarantees	Total
	(billions of Won)		
Sungdong Shipbuilding & Marine Engineering Co., Ltd.	₩1,650	₩ -	₩1,650
Daesun Shipbuilding & Engineering Co., Ltd	487	135	622
SPP Shipbuilding Co., Ltd.	534	-	534
STX Offshore & Shipbuilding Co., Ltd.	87	320	407
DB Metal Co., Ltd.	98	-	98
Recaudo Bogota S.A.S.	48	26	74
Kode Novus I, LLC.	49	-	49
Kumho Tire Co., Inc.	24	17	40
Kumho Tire Georgia Inc.	32	-	32
Wooyang HC Co., Ltd	10	21	32
Total	₩3,019	₩ 519	₩3,538

In the early 1990's, at the direction of the Government, the Bank extended a commodity loan in the aggregate amount of US$466 million to Vnesheconombank, the Bank for Foreign Economic Affairs of the former Soviet Union, which was guaranteed by the government of the former Soviet Union, as part of the Government's policy to enhance economic cooperation between the two countries. Since the dissolution of the Soviet Union, the Government had been negotiating repayment terms with the government of the Russian Federation, which agreed to assume the guarantee of the former Soviet Union in respect of the obligations of Vnesheconombank under such loan. In 1995, the two governments came to an agreement on a repayment schedule in respect of approximately half of the loan. Since the agreement was made, US$229 million of the principal was repaid.

In June 2003, the two governments reached an agreement as to the rescheduling of the remaining portion of the loan and the change of the borrower from Vnesheconombank to the government of the Russian Federation. As a result, in September 2003, the Bank upgraded the classification of the outstanding ₩258 billion (including accrued and unpaid interest) of its exposure to the government of the Russian Federation from estimated loss to doubtful in terms of asset quality and established a 70% provisioning level for that credit exposure. In June 2004, the Bank further upgraded the classification of its exposure to the government of the Russian Federation from doubtful to precautionary in terms of asset quality, following the continued repayment of the loan by the government of the Russian Federation in accordance with the agreed payment schedule. As of December 31, 2017, the Bank's exposure to the government of the Russian Federation amounted to ₩91 billion and the Bank established a 0.2% provisioning level for that credit exposure.

The Bank cannot provide any assurance that its current level of exposure to non-performing assets will continue in the future or that any of its borrowers (including its largest borrowers as described above) is not currently facing, or in the future will not face, material financial difficulties.

As of December 31, 2017, the amount of the Bank's non-performing assets was ₩3,934 billion, a decrease of 32% from ₩5,778 billion as of December 31, 2016. As of December 31, 2017, the Bank's non-performing asset ratio was 3.6%, compared to 4.5% as of December 31, 2016.

The following table sets forth the Bank's reserves for possible credit losses as of December 31, 2015, 2016 and 2017:

	As of December 31,		
	2015	2016	2017
	(billions of Won, except for percentages)		
Loan Loss Reserve (A) (1)	₩ 2,783	₩ 4,439	₩ 4,165
NPA (B) (2)	4,037	5,778	3,934
Total Shareholders' Equity (C)	11,026	11,220	12,513
Reserve to NPA (A/B)	69%	77%	106%
Equity at Risk (B-A)/C	7%	10%	—

(1) Consists of allowance for loan losses and provisions for confirmed acceptances and guarantees, excluding the regulatory reserve for loans and guarantees.

(2) Non-performing assets, which are defined as assets that are classified as substandard or below.

Source: Internal accounting records

The following table sets forth the Bank's actual loan loss reserve ratios as of December 31, 2015, 2016 and 2017:

Classification of Loans	Actual Reserve Coverage (as of December 31, 2015)	Actual Reserve Coverage (as of December 31, 2016)	Actual Reserve Coverage (as of December 31, 2017)
Normal	0.5%	0.4%	0.3%
Precautionary	17.3%	17.1%	12.1%
Substandard	47.6%	31.6%	28.1%
Doubtful	63.2%	68.4%	85.4%
Estimated Loss	98.0%	75.0%	97.7%

Investments

Under the KEXIM Decree, the Bank is not allowed to hold stocks or securities of more than three years' maturity in excess of 60% of the Bank's equity capital. However, investment in the following securities is not subject to this restriction:

- Government bonds;
- The Bank of Korea currency stabilization bonds;
- securities acquired via contributions by the Government; and
- securities acquired through investment approved by the Minister of Economy and Finance, for research related to the Bank's operations, for the Bank's financing or pursuant to Korean statutes.

As of December 31, 2017, the Bank's total investment in securities amounted to ₩9,381 billion, representing 11% of the Bank's total assets. The Bank's securities portfolio consists primarily of available-for-sale securities. Available-for-sale securities mainly consist of marketable securities (including equity securities in Industrial Bank of Korea which was recapitalized by the Government through the Bank) and non-marketable securities (including equity securities in Korea Expressway Corporation, Korea Land & Housing Corporation and Korea Aerospace Industries Ltd. which were in-kind contributions made by the Government to the Bank). In 2014, the Bank sold 976,625 shares of common stock, which represented all of its holding of common stock in Kumho Tire, for ₩11 billion. In 2015, the Bank sold 3,459,279 shares of common stock, which represented all of its holding of common stock in SAMT Co., Ltd., for ₩4 billion. In 2016, the Bank sold 639,505 shares of common stock, which represented 5% of its holdings of common stock in Taihan Electric Wire Co., Ltd., for ₩2 billion. In 2017, the Bank sold 2,199,936 shares of common stock of STX Heavy Industries, which represented all of its holdings of common stock in the company, for ₩19 billion.

The following table sets out the composition of the Bank's securities as of December 31, 2015, 2016 and 2017:

Type of Investment Securities	As of December 31, 2015		As of December 31, 2016		As of December 31, 2017	
	Amount	%	Amount	%	Amount	%
	(billions of Won, except for percentages)					
Available-for-sale Securities	₩ 5,837	88%	₩ 7,027	89%	₩ 6,693	71%
Held-to-maturity Securities	108	2	111	1	89	1
Investments in Associates and Subsidiaries	679	10	766	10	2,599	28
Total	₩ 6,624	100%	₩ 7,904	100%	₩ 9,381	100%

For further information relating to the classification guidelines and methods of valuation for unrealized gains and losses on the Bank's securities, see Note 2 and Note 5 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

Guarantees and Acceptances and Contingent Liabilities

The Bank has credit risk factors that are not reflected on the balance sheet, which include risks associated with guarantees and acceptances. Guarantees and acceptances do not appear on the balance sheet, but rather are recorded as an off-balance sheet item in the notes to the financial statements. Guarantees and acceptances include financial guarantees, project related guarantees, such as bid bond, advance payment bond, performance bond or retention bond, and acceptances and advances relating to trade financings such as letters of credit or import freight. Contingent liabilities, for which the guaranteed amounts were not finalized, appear as unconfirmed guarantees and acceptance items in the notes to the financial statements as off-balance sheet items.

As of December 31, 2017, the Bank had issued a total amount of ₩38,961 billion in confirmed guarantees and acceptances, of which ₩33,088 billion, representing 85% of the total amount, was classified as normal, ₩5,305 billion, representing 14% of the total amount, was classified as precautionary, and ₩567 billion, representing 1% of the total amount, was classified as substandard or below.

Derivatives

The objective in the Bank's strategy and policies on derivatives is to actively manage and minimize the Bank's foreign exchange and interest rate risks. It is the Bank's policy to hedge all currency and interest rate risks wherever possible (taking into consideration the cost of hedging). The Bank uses various hedging instruments, including foreign exchange forwards and options, interest rate swaps, and cross currency swaps.

Under the Bank's internal trading rules that have been submitted to the Financial Supervisory Service, the Bank's policy is to engage in derivative transactions mainly for hedging the Bank's own position. As part of the Bank's total exposure management system, the Bank monitors its exposure to derivatives and may make real-time inquiries, which enables the Bank's Risk Management Department to check the Bank's exposure on a regular basis. Under the guidelines set by the Financial Supervisory Service, the Bank is required to submit reports on the its derivatives exposure to the Financial Supervisory Service on a quarterly basis. As a measure to reduce the risk of intentional manipulation or error, the Bank has separated responsibility for different functions such as initiation, authorization, approval, recording, monitoring and reporting to the Financial Supervisory Service. The Risk Management Department conducts regular reviews of derivative transactions to monitor any breach of compliance with the relevant regulatory requirements.

As of December 31, 2017, the Bank's outstanding loans made at floating rates of interest totaled approximately ₩48,085 billion, whereas the Bank's outstanding borrowings made at floating rates of interest totaled approximately ₩51,126 billion, including those raised in Australian Dollars, New Zealand Dollars, Canadian Dollars, Euro, Swiss Franc, Chinese Yuan, Indonesian Rupiah, Indian Rupee, Hong Kong Dollars, Brazil Real, Swedish Krona and Singapore Dollars and swapped into U.S. dollar floating rate borrowings. As a result, the Bank is exposed to possible interest rate risks to the extent that the amount of its borrowings made at floating rates of interest exceeds the amount of its loans made at floating rates of interest. Foreign exchange risk arises because a majority of the Bank's assets and liabilities are denominated in non-Won currencies. In order to match its currency and interest rate structure, the Bank generally enters into swap transactions.

The following table shows the unsettled notional amounts and estimated fair values of derivatives the Bank held as of the dates indicated.

	As of December 31,								
	2015			2016			2017		
	Unsettled Notional Amount	Fair Value of Assets	Fair Value of Liabilities	Unsettled Notional Amount	Fair Value of Assets	Fair Value of Liabilities	Unsettled Notional Amount	Fair Value of Assets	Fair Value of Liabilities
	(billions of Won)								
Currency forwards	₩ 6,156	₩ 208	₩ 96	₩ 5,581	₩ 145	₩ 157	₩ 6,451	₩ 113	₩ 152
Currency swaps	19,101	114	3,167	23,132	273	2,501	24,519	547	1,136
Interest rate swaps	23,111	296	160	34,407	395	530	38,781	419	681
Total	₩48,368	₩ 619	₩ 3,422	₩63,120	₩ 813	₩ 3,188	₩69,751	₩ 1,079	₩ 1,969

As of December 31, 2017, the Bank had entered into 739 currency related derivative contracts with a notional amount of ₩30,970 billion and had entered into 468 interest rate related derivative contracts with a notional amount of ₩38,781 billion. In connection with its currency forwards and currency swaps, the Bank had net valuation loss of ₩628 billion in 2017 and ₩2,240 billion in 2016, primarily due to the appreciation of the U.S. dollar against other currencies, which resulted in an increase in the value of the Bank's obligations denominated in the U.S. dollar. In connection with its interest rate swaps, the Bank recorded net valuation loss of ₩262 billion in 2017 and ₩135 billion in 2016, primarily due to an increase in benchmark interest swap rates, such as the U.S. dollar interest swap rate in 2017, which resulted in a decrease in the value of the Bank's floating-for-fixed interest rate swaps. See Note 20 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

Sources of Funding

The Bank obtains funds primarily through borrowings from the issuance of bonds in both domestic and international capital markets, borrowings from domestic and foreign financial institutions, capital contributions and internally generated funds. Internally generated funds result from various activities the Bank carried on and include principal and interest payments on its loans, fees from guarantee operations and other services, and income from marketable securities the Bank holds.

The Bank raised a net total of ₩53,486 billion (new borrowings plus loan repayments by its clients less repayment of its existing debt) during 2017, an 11% decrease compared with the previous year's ₩60,061 billion. The total loan repayments, including prepayments by the Bank's clients, during 2017 amounted to ₩47,448 billion, a decrease of 11% from ₩53,039 billion during 2016.

Since the Bank's establishment, the Government has, from time to time, provided the Bank with loans to support the Bank's lending to Korean exporters and provide liquidity to the Bank. As of December 31, 2017, the Bank had no outstanding borrowings from the Government. The Bank also issued Won-denominated domestic bonds in the aggregate amounts of ₩11,180 billion, ₩12,270 billion and ₩13,670 billion during 2015, 2016 and 2017, respectively.

The Bank has diversified its funding sources by borrowing from various overseas sources and issuing long-term floating-rate notes and fixed-rate debentures in the international capital markets. These issues were in foreign currencies, including the U.S. dollar, Thai Baht, Malaysia Ringgit, Japanese Yen, Australian Dollar, Euro, Hong Kong Dollar, Singapore Dollar, Swiss Franc, Brazilian Real, Turkish Lira, Mexican Peso, Peruvian Sol, Indian Rupee, Indonesian Rupiah, Chinese Yuan, New Zealand Dollar, South African Rand, Deutsche Mark, Swedish Krona, Czech Koruna, Norwegian Krone, British Pound and Canadian Dollar and have original maturities ranging from one to thirty years.

During 2017, the Bank issued Eurobonds in the aggregate principal amount of US$4,857 million in various types of currencies under the Bank's existing medium term notes program, a 8% decrease from US$5,283 million in 2016. These bond issues consisted of offerings of US$2,250 million, HKD 761 million, BRL 1,611 million, EUR 750 million, CNH 200 million, SGD 200 million, INR 6,300 million, CAD 365 million, AUD 100 million, IDR 2,645,400 million, CHF 250 million and SEK 250 million. In addition, the Bank issued global bonds during 2017 in the aggregate amount of US$3,500 million under its U.S. shelf registration statement compared with US$5,600 million in 2016. As of December 31, 2017, the outstanding amounts of the Bank's notes and debentures were US$29,466 million, JPY 77,820 million, HKD 6,561 million, MYR 500 million, BRL 3,222 million, EUR 2,711 million, THB 23,800 million, CHF 400 million, AUD 3,352 million, INR 10,942 million, CNY 11,201 million, IDR 5,395,400 million, PEN 266 million, TRY 21 million, NZD 1,238 million, ZAR 654 million, NOK 2,750 million, CZK 700 million, GBP 60 million, CAD 690 million, SEK 250 million and SGD 621 million.

The Bank also borrows from foreign financial institutions in the form of loans that are principally made by syndicates of commercial banks at floating or fixed interest rates and in foreign currencies, with original maturities ranging from two to five years. As of December 31, 2017, the outstanding amount of such borrowings from foreign financial institutions was US2,500 million.

The Bank's capital stock has increased from time to time since the Bank's establishment. From January 1998 to December 2017, the Government contributed ₩10,435 billion to the Bank's capital. As of December 31, 2017, the Bank's total capital stock amounted to ₩11,815 billion, and the Government, The Bank of Korea and The Korea Development Bank owned 66%, 10% and 24%, respectively, of the Bank's capital stock.

In connection with its fund raising activities, the Bank has from time to time sold third parties promissory notes, including related guarantees, acquired as collateral in connection with export credit financings.

The KEXIM Act provides that the aggregate outstanding principal amount of all of the Bank's borrowings, including the total outstanding export-import financing debentures the Bank issued in accordance with the KEXIM Decree, may not exceed an amount equal to thirty times the sum of the Bank's capital stock plus the Bank's reserves. As of December 31, 2017, the aggregate outstanding principal amount of the Bank's borrowings (including export-import financing debentures), which was ₩67,075 billion, was equal to 18% of the authorized amount of ₩375,688 billion.

The Bank is not permitted to accept demand or time deposits.

Each year the Bank must submit to the Government for its approval an operating plan which includes the Bank's target levels for different types of funding. The following table is the part of the operating plan dealing with fund-raising for 2018:

Sources of Fund	(billions of Won)
Capital Contribution	-
Borrowings	20,040
Net Collection of Loans	26,569
Collection of Loans	45,862
Repayment of Debts	(19,293)
Others	1,391
Total	₩ 48,000

Debt

Debt Repayment Schedule

The following table sets out the principal repayment schedule for the Bank's outstanding debt (consisting of borrowings and debentures) as of December 31, 2017:

Debt Principal Repayment Schedule

	Maturing on or before December 31,				
Currency (1)	**2018**	**2019**	**2020**	**2021**	**Thereafter**
			(billions of Won)		
Won	₩ 11,370	₩ 1,040	₩ -	₩ -	₩ 1,710
Foreign (2)	8,280	9,256	8,342	6,434	20,644
Total Won Equivalent	₩ 19,650	₩ 10,296	₩ 8,342	₩ 6,434	₩ 22,354

(1) Borrowings and debentures in foreign currency have been translated into Won at the market average exchange rates on December 31, 2017, as announced by the Seoul Money Brokerage Services Ltd.

(2) This figure includes debentures, bank loans, commercial papers and repurchase agreements.

Normally the Bank determines the level of its foreign currency reserves based upon an estimate, at any given time, of aggregate loan disbursements to be made over the next two to three months. The Bank's average foreign currency reserves in 2016 and 2017 were approximately US$4,100 million and US$3,671 million, respectively.

Although the Bank currently believes that such reserves, together with additional borrowings available under its uncommitted short-term backup credit facilities and commercial paper programs, will be sufficient to repay the Bank's outstanding debt as it becomes due, there can be no assurance that the Bank will continue to be able to borrow under such credit facilities, or that the devaluation of the Won will not adversely affect the Bank's ability to access funds sufficient to repay the Bank's foreign currency denominated indebtedness in the future. In addition to maintaining sufficient foreign currency reserves, the Bank monitors the maturity profile of its foreign currency assets and liabilities to ensure that there are sufficient maturing assets to meet its liabilities as they become due. As of December 31, 2017, the Bank's foreign currency assets maturing within three months, six months and one year exceeded the Bank's foreign currency liabilities coming due within such periods by US$4,519 million, US$5,900 million and US$6,411 million, respectively. As of December 31, 2017, the Bank's total foreign currency liabilities exceeded the Bank's total foreign currency assets by US$7,630 million.

Internal and External Debt of the Bank

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

Internal Debt of the Bank

	(billions of Won)
2013	8,130
2014	8,670
2015	9,700
2016	12,080
2017	14,120

The following table sets out, by currency and the equivalent amount in U.S. Dollars, the outstanding external debt of the Bank as of December 31, 2017:

External Debt of the Bank

	Amount in Original Currency		Equivalent Amount in U.S. Dollars (1)	
	(billions)			
US$	US$	34.8	US$	34.8
Euro (EUR)	EUR	2.7		3.2
Japanese yen (JPY)	JPY	77.8		0.7
Brazilian real (BRL)	BRL	3.2		1.0
Australian Dollars (AUD)	AUD	3.4		2.6
British Pound (GBP)	GBP	0.1		0.1
Thai Baht (THB)	THB	23.8		0.7
Hong Kong dollar (HKD)	HKD	6.6		0.8
Swiss franc (CHF)	CHF	0.4		0.4
Malaysian Ringgit (MYR)	MYR	0.5		0.1
Indonesian rupiah (IDR)	IDR	5,395.4		0.4
Chinese Yuan (CNY)	CNY	11.2		1.7
Norwegian Krone (NOK)	NOK	2.8		0.3
Turkish Lira (TRY)	TRY	0.1		0.0
Mexican Peso (MXN)	MXN	0.3		0.0
New Zealand Dollar (NZD)	NZD	1.2		0.9
Indian Rupee (INR)	INR	10.9		0.2
South African Rand (ZAR)	ZAR	0.7		0.1
Peru Nuevo sol (PEN)	PEN	0.3		0.1
Czech Koruna (CZK)	CZK	0.7		0.5
Canadian Dollar (CAD)	CAD	0.7		0.5
Singapore Dollar (SGD)	SGD	0.6		3.2
			US$	49.2

(1) Amounts expressed in currencies other than U.S. dollars are converted to U.S. dollars at the exchange rate announced by the Seoul Money Brokerage Services, Ltd. in effect on December 31, 2017 or the prevailing market rate on December 31, 2017.

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

External Debt of the Bank

	(billions of Won)
2013	40,203
2014	48,411
2015	54,631
2016	59,847
2017	52,710

Debt Record

The Bank has never defaulted in the payment of principal of, or interest on, any of its obligations.

Credit Policies, Credit Approval and Risk Management

Credit Policies

The Credit Policy Department functions as the Bank's centralized policy-making and planning division with respect to the Bank's lending activities. The Credit Policy Department formulates and revises the Bank's internal regulations on loan programs, sets basic lending guidelines on a country basis and gathers data from the Bank's various operating groups and produces various internal and external reports.

Credit Approval

The Bank has multiple levels of loan approval authority, depending on the loan amount and other factors such as the nature of the credit, the conditions of the transaction, and whether the loan is secured. The Bank's Board of Directors can approve loans of any amount. The Chief Executive Credit Committee, Credit Committee, Loan Officer Committee, Director Generals and Directors each have 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.

At each level of authority, loan applications are reviewed on the basis of the feasibility of the project from a technical, financial and economic point of view in addition to evaluating the probability of recovery. In conducting such a review, the following factors are considered:

- eligibility of the transaction under the Bank's financing criteria;
- country risk of the country of the borrower and the country in which the related project is located;
- credit risk of the borrower;
- a supplier's ability to perform under the related supply contract;
- legal disputes over the related project and supply contract; and
- availability of collateral.

When the credit rating of a prospective borrower does not meet the Bank's internal rating criteria, the Bank's policy is to ensure that the loans are either guaranteed or made on a partially or fully secured basis. As of December 31, 2017, approximately 12% of the Bank's total outstanding loans were guaranteed or made on a partially or fully secured basis.

Risk Management

The Bank's overall risk management policy is set by the Risk Management Committee, which meets on a quarterly basis and from time to time to establish tolerance limits for various exposures, whereas the overall risk management is overseen by the Risk Management Department, which is responsible for monitoring risk exposure.

The Risk Management Department reports the Bank's loan portfolio to the Financial Supervisory Service on a quarterly basis. The Risk Management Department also monitors the Bank's operating groups' compliance with internal guidelines and procedures. To manage liquidity risk, the Bank reviews the strategy for the sources and uses of funds, with each division submitting projected sources and uses to the Treasury Group. The Risk Management Department and the Treasury Group continually monitor the Bank's overall liquidity and the Treasury Group prepares both weekly and monthly cash flow forecasts. The Bank's policy is to maintain a liquidity level, which can cover loan disbursements for a period of two to three months going forward. The Bank protects itself from potential liquidity squeezes by maintaining sufficient amount of liquid assets with additional back-up of short-term credit lines.

The Bank's core lending activities expose the Bank to market risk, mostly in the form of interest rate and foreign currency risks. The Risk Management Department reports interest rate and foreign exchange gap positions to the Risk Management Committee on a quarterly basis. The Bank also monitors changes in, and matches of, foreign currency assets and liabilities in order to reduce exposure to currency fluctuations.

One of the key components of the Bank's risk management policy, which also affects the Bank's fund-raising efforts, is to monitor matches of asset maturities and liability maturities. The average maturity as of December 31, 2017 for the Bank's Won- and foreign currency-denominated loans was 14 months and 43 months, respectively, and for Won- and foreign currency-denominated liabilities was 21 months and 54 months, respectively.

The Bank follows an overall risk management process where the Bank:

- determines the risk management objectives;
- identifies key exposures;
- measures key risks; and
- monitors risk management results.

The Bank's risk management system is a continuous system that is frequently evaluated and updated on an ongoing basis.

Capital Adequacy

Under the Financial Supervisory Service's guidelines on risk-adjusted capital which were introduced in consideration of the standards set by the Bank for International Settlements, all banks in Korea, including the Bank, are required to maintain a capital adequacy ratio (Tier I and Tier II) of at least 8% on a consolidated basis. To the extent that the Bank fails to maintain this ratio, the Korean regulatory authorities may require corrective measures ranging from management improvement recommendations to emergency measures such as disposal of assets.

The current capital adequacy requirements of the Financial Services Commission are derived from a new set of bank capital measures, referred to as Basel III, which the Basel Committee on Banking Supervision initially introduced in 2009 and began phasing in starting from 2013. Commencing in July 2013, the Financial Services Commission promulgated a series of amended regulations implementing Basel III, pursuant to which Korean banks, including the Bank, were required to maintain a minimum ratio of Tier I common equity capital (which principally includes equity capital, capital surplus and retained earnings less reserve for credit losses) to risk-weighted assets of 3.5% and Tier I capital to risk-weighted assets of 4.5% from December 1, 2013, which minimum ratios were increased to 4.0% and 5.5%, respectively, from January 1, 2014 and increased further to 4.5% and 6.0%, respectively, from January 1, 2015. Such requirements are in addition to the pre-existing requirement for a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0%, which remains unchanged. The amended regulations also require an additional capital conservation buffer of 0.625% on January 1, 2016, with such buffer to increase to 1.25% on January 1, 2017, to 1.875% on January 1, 2018 and to 2.5% on January 1, 2019, as well as a potential counter-cyclical capital buffer of up to 2.5% starting in 2016, which will be determined on a quarterly basis by the Financial Services Commission. Presently, the Financial Services Commission has set the counter-cyclical capital buffer at 0%. As of December 31, 2017, the Bank's capital adequacy ratio, on a consolidated basis, was 12.9%, an increase from 10.8% as of December 31, 2016, which was primarily due to an increase in total capital and a decrease in total risk-weighted assets.

The following table sets forth the Bank's capital base and capital adequacy ratios (on a consolidated basis) reported as of December 31, 2015, 2016 and 2017:

	As of December 31,		
	2015	2016	2017
	(billions of Won, except for percentages)		
Tier I	₩ 10,586	₩ 11,239	₩ 12,447
Capital stock (including capital surplus and capital adjustments)	8,878	10,405	11,686
Retained Earnings [(1)]	1,611	606	623
Accumulated other comprehensive income	124	286	185
Others	2	3	2
Deductions from Tier I Capital	(29)	(61)	(49)
Capital Adjustments	—	—	—
Deferred Tax Asset	—	—	—
Others	(29)	(61)	(49)
Tier II (General Loan Loss Reserves)	1,301	1,975	1,678
Total Capital	11,887	13,214	14,126
Risk Adjusted Assets	118,438	122,663	109,501
Capital Adequacy Ratios			
Tier I common equity	8.9%	9.2%	11.4%
Tier I	8.9%	9.2%	11.4%
Tier I and Tier II	10.0%	10.8%	12.9%

(1) Net amount after deducting regulatory reserve for bad loans.

Source: Internal accounting records

Overseas Operations

The Bank maintains an international presence through 24 overseas representative offices, which are located in New York City, Tokyo, Beijing, São Paolo, Paris, Washington D.C., Shanghai, New Delhi, Dubai, Moscow, Mexico City, Tashkent, Hanoi, Manila, Jakarta, Yangon, Bogota, Istanbul, Dar es Salaam, Maputo, Accra, Phnom Penh, Addis Ababa and Colombo.

The Bank also has three wholly-owned subsidiaries: KEXIM Bank (UK) Ltd. in London, KEXIM (Asia) Ltd. in Hong Kong and KEXIM Vietnam Leasing Co., Ltd. in Ho Chi Minh City. These subsidiaries are engaged in the merchant banking and lease financing businesses, and assist the Bank in raising overseas financing. The Bank also owns 85% of P.T. Koexim Mandiri Finance, a subsidiary in Jakarta, which is primarily engaged in the business of lease financing.

The table below sets forth brief details of the Bank's subsidiaries as of December 31, 2017:

	Principal Place of Business	Type of Business	Book Value	Bank's Holding
			(billions of Won)	(%)
Kexim Bank (UK) Ltd.	United Kingdom	Commercial Banking	₩ 48	100%
KEXIM (Asia) Ltd.	Hong Kong	Commercial Banking	49	100
P.T. Koexim Mandiri Finance	Indonesia	Leasing and Factoring	25	85
Kexim Vietnam Leasing Co., Ltd.	Vietnam	Leasing and Lending	10	100

Property

The Bank's head office is located at 38 Eunhaeng-ro, Yeongdeungpo-gu, Seoul 07242, Korea, a 45,715 square meter building on a site of 9,110 square meters and owned by the Bank. In addition to the head office, the Bank owns a staff training center located near Seoul on a site of 47,881 square meters and a marine finance center, a 4,423 square meter building, located in Busan on a site of 556 square meters. The Bank also maintains 13 branches in Busan, Gwangju, Daegu, Changwon, Daejeon, Suwon, Incheon, Ulsan, Cheongju, Jeonju, Gumi, Yeosu and Wonju. The Bank's domestic branch offices and overseas representative offices are located in facilities held under long-term leases.

Management and Employees

Management

The Bank's governance and management is the responsibility of the Bank's Board of Directors, which has authority to decide important matters relating to the Bank's business. The Board of Directors is chaired by the Bank's President and is comprised of six members: the President, the Deputy President, two Senior Executive Directors and two Non-standing Senior Executive Directors. The Auditor may attend and state his/her opinion at the meetings of the Board of Directors. The President of Korea appoints the Bank's President upon the recommendation of the Minister of Economy and Finance. The Minister of Economy and Finance appoints the Deputy President and all Senior Executive Directors upon the recommendation of the Bank's President. The Minister of Economy and Finance appoints the Auditor. All Board members and the Auditor serve for three years and are eligible for re-appointment for successive terms of office.

The members of the Board of Directors are currently as follows:

Name	Age	Board Member Since	Position
Sung-soo Eun	56	September 11, 2017	Chairman and President
Young-pyo Hong	62	May 15, 2015	Deputy President
Seung-joong Kang	58	January 18, 2018	Senior Executive Director
Deog-yong Shin	57	January 18, 2018	Senior Executive Director
Sung-bae Kim	63	December 30, 2016	External Director
Gong-pil Choi	60	December 30, 2016	External Director

The Bank's basic policy guidelines for activities are established by the Operations Committee. According to the By-laws, the Operations Committee is composed of officials nominated as follows:

- President of KEXIM;
- official of the Ministry of Economy and Finance, nominated by the Minister of Economy and Finance;
- official of the Ministry of Foreign Affairs, nominated by the Minister of Foreign Affairs;
- official of the Ministry of Trade, Industry & Energy, nominated by the Minister of Trade, Industry & Energy;
- official of the Ministry of Land, Infrastructure and Transport, nominated by the Minister of Land, Infrastructure and Transport;
- official of the Ministry of Oceans and Fisheries, nominated by the Minister of Oceans and Fisheries;

- official of the Financial Services Commission, nominated by the Chairman of the Financial Services Commission;
- executive director of The Bank of Korea, nominated by the Governor of The Bank of Korea;
- executive director of the Korea Federation of Banks, nominated by the Chairman of the Korea Federation of Banks;
- representative of an exporters' association (Korea International Trade Association), nominated by the Minister of Economy and Finance after consultation with the Minister of Trade, Industry & Energy;
- officer of the Korea Trade Insurance Corporation established under the Trade Insurance Act, nominated by the Chairman and President of the Korea Trade Insurance Corporation; and
- up to two persons who have extensive knowledge and experience in international economic cooperation work, recommended by the Bank's President and appointed by the Minister of Economy and Finance.

The members of the Operations Committee are currently as follows:

Name	Age	Member Since	Position
Sung-soo Eun	56	September 11, 2017	Chairman and President of KEXIM
Kun Il Hwang	57	September 28, 2017	Deputy Minister for International Economic Affairs, Ministry of Economy and Finance
Kang-hyeon Yun	54	September 22, 2017	Deputy Minister for Economic Affairs, Ministry of Foreign Affairs
Young Sam Kim	54	August 18, 2017	Deputy Minister for International Trade and Investment, Ministry of Trade, Industry & Energy
Il Pyeong Kim	53	September 25, 2017	Assistant Minister for Construction Policy Bureau, Ministry of Land, Infrastructure and Transport
Ki-doo Eom	51	January 25, 2017	Director of Shipping & Logistics Bureau, Ministry of Oceans and Fisheries
Byeong Doo Sohn	53	September 12, 2017	Secretary General, Financial Services Commission
Ho Soon Shin	55	September 26, 2017	Deputy Governor, The Bank of Korea
Jae Moon Hong	57	March 7, 2018	Senior Executive Director, Korea Federation of Banks
Jin Hyun Han	58	February 27, 2018	Executive Vice Chairman, Korea International Trade Association
Byung-tae Kang	58	March 23, 2017	Deputy President, Korea Trade Insurance Corporation
Yoon Heo (Private Sector)	55	February 21, 2017	Professor, Sogang Graduate School of International Studies
Won-chang Jang (Private Sector)	53	February 21, 2017	Professor, Inha University

Employees

As of December 31, 2017, the Bank had 1,076 employees, among whom 775 employees were members of its labor union. The Bank has never experienced a work stoppage of a serious nature.

Every two years, the management and union negotiate and enter into a collective bargaining agreement. The most recent collective bargaining agreement was entered into in November 2017.

Financial Statements and the Auditors

The Minister of Economy and Finance appoints the Bank's internal Auditor who is responsible for examining the Bank's financial operations and auditing the Bank's financial statements and accounting records. The present internal Auditor is Cho Yong Soon, who was appointed for a three-year term on January 18, 2018.

The Bank prepares its financial statements annually for submission to the Minister of Economy and Finance, accompanied by an opinion of the Auditor. Although the Bank is not legally required to have financial statements audited by external auditors, an independent public accounting firm has audited the Bank's separate financial statements since 1983 and consolidated financial statements since 1998. As of the date of this Offering Circular, the Bank's independent auditor is KPMG Samjong Accounting Corp., located at 27th Floor, Gangnam Finance Center, 737 Yeoksam-dong, Gangnam-gu, Seoul, Korea which has audited the Bank's separate financial statements as of and for the year ended December 31, 2017 included in this Offering Circular. Deloitte Anjin LLC, located at 9th Floor, One IFC Bldg., 10 Gukjegeumyung-ro, Yeongdeungpo-gu, Seoul, Korea has audited the Bank's separate financial statements as of and for the year ended December 31, 2016 included in this Offering Circular.

The Bank's separate financial statements and information included in this Offering Circular were prepared under K-IFRS. For a summary of financial statement preparation and significant accounting policies, see Note 2 of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016. These principles and procedures differ in certain material respects from generally accepted accounting principles in the United States.

The Bank recognizes interest income on loans and debt securities using the effective interest method. See Note 3(17) of the notes to the Bank's separate financial statements as of and for the years ended December 31, 2017 and 2016.

The Bank classifies a non-derivative financial asset as held for trading if either it is acquired for the purpose of selling it in the near term, or it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. The Bank classifies debt securities with fixed or determinable payments and fixed maturities, and which the Bank intends to hold to maturity, as held-to-maturity securities. The Bank classifies investments that are categorized as neither trading securities nor held-to-maturity securities as available-for-sale securities. The Bank records its trading and available-for-sale securities at fair value. However, investments in available-for-sale securities that do not have readily determinable fair values are recognized at cost. The Bank records held-to-maturity securities at amortized cost. The Bank recognizes impairment losses on securities in current operations when the recoverable amounts are less than the carrying amount of equity securities or amortized cost of debt securities.

The Bank records debenture issuance costs as discounts on debentures and amortizes them over the maturity period of the debentures using the effective interest method.

The Bank's financial statements are separate financial statements prepared in accordance with the requirements of K-IFRS 1027, *Separate Financial Statements*, in which a parent, or an investor with joint control of, or significant influence over, an investee accounts for the investments based on the cost method or valuation methods in accordance with K-IFRS 1039.

Since the Bank initially adopted K-IFRS in 2013, the Bank's premises and equipment on the statements of financial position as of January 1, 2013 have been measured at their fair value in accordance with IFRS 1 paragraph 30(b), and the Bank has chosen to apply the cost model to the premises and equipment in accordance with IAS 16 paragraph 29.

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 unaudited separate financial statements as of and for the six months ended June 30, 2018 included in this Offering Circular. As permitted by the transition rules of K-IFRS 1109, the Bank's comparative unaudited separate financial statements as of December 31, 2017 and for the six months ended June 30, 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 unaudited separate financial statements as of and for the six months ended June 30, 2018. For information regarding the impact of the application of K-IFRS 1109 to the Bank's separate financial statements, see Note 38 of the notes to the Bank's unaudited separate financial statements as of June 30, 2018 and for the six months ended June 30, 2018 and 2017 included in this Offering Circular.

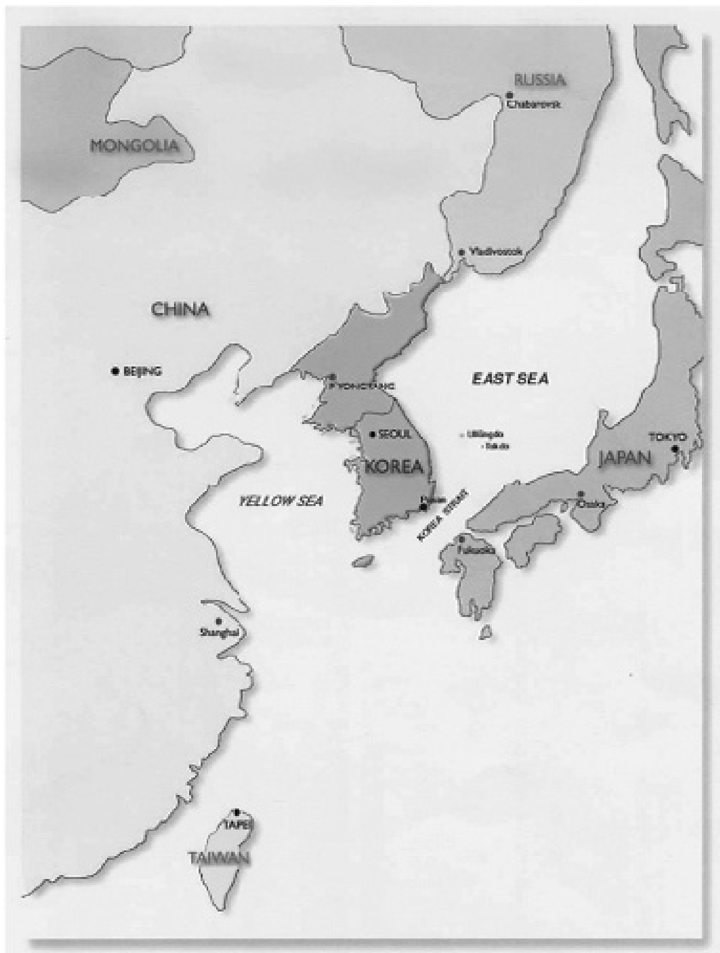
THE REPUBLIC OF KOREA

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. In connection with its investigation of former President Park, the special independent prosecutor also conducted related investigations of several large Korean business groups and members of their senior management for bribery, embezzlement and other possible misconduct, which the Korean prosecutor's office has continued following the end of the special independent prosecutor's term. On April 17, 2017, the Korean prosecutor's office indicted former President Park on 18 charges including bribery, abuse of power and coercion. On April 6, 2018, the Seoul Central District Court found former President Park guilty of 16 counts of corruption, including bribery, abuse of power and coercion, and sentenced her to 24 years in prison and assessed a fine of ₩18 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 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, Daejon 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 October 2, 2018, the parties control the following number of seats in the National Assembly:

	MPK	LKP	BFP	PDP	Others	Total
Number of seats	129	112	30	14	14	299

Relations with North Korea

Relations between the Republic and North Korea have been tense over most of the Republic’s history. The Korean War began with the invasion of the Republic by communist forces from the north in 1950, which was repelled by the Republic and the United Nations forces led by the United States. Following a military stalemate, an armistice was reached establishing a 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, May and September 2018 and between the United States and North Korea in June 2018, 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;
- the Organization for Economic Cooperation and Development, or OECD; and
- the Asian Infrastructure Investment Bank.

The Economy

The following table sets forth information regarding certain of the Republic's key economic indicators for the periods indicated.

	As of or for the year ended December 31,				
	2013	**2014**	**2015**	**2016**	**2017** (6)
	(billions of dollars and trillions of Won, except percentages)				
GDP Growth (at current prices)	3.8%	4.0%	5.3%	5.0%	5.4% (6)
GDP Growth (at chained 2010 year prices)	2.9%	3.3%	2.8%	2.9%	3.1% (6)
Inflation	1.3%	1.3%	0.7%	1.0%	1.9%
Unemployment (1)	3.1%	3.5%	3.6%	3.7%	3.7%
Trade Surplus (2)	$ 44.0	$ 47.2	$ 90.3	$ 89.2	$ 95.2
Foreign Currency Reserves	$ 346.5	$ 363.6	$ 368.0	$ 371.1	$ 389.3
External Liabilities (3)	$ 423.5	$ 424.3	$ 396.1	$ 384.1	$ 418.8 (6)
Fiscal Balance	₩ 14.2	₩ 8.5	₩ (0.2)	₩ 16.9	₩ 24.0 (6)
Direct Internal Debt of the Government (4) (as % of GDP (5))	32.8%	34.6%	37.3%	38.5% (6)	39.8% (6)
Direct External Debt of the Government (4) (as % of GDP (5))	0.6%	0.5%	0.5%	0.4% (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 includes 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 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 ₩1,450.9 trillion as of December 31, 2017 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 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 13.8% of the Republic's total population as of December 31, 2017, an increase from 7.2% as of December 31, 2000, and is expected to surpass 15% in 2020 and 20% in 2026, which could lead to the Korean government's 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).

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

	2013	2014	2015	2016	2017 (1)	As % of GDP 2017 (1)
			(billions of Won)			
Gross Domestic Product at Current Market Prices:						
Private	727,799.9	748,200.8	771,239.2	798,728.9	832,234.7	48.1
Government	214,467.3	224,724.2	234,766.4	249,166.9	265,347.0	15.3
Gross Capital Formation	416,000.3	435,078.1	452,315.1	480,261.6	537,732.6	31.1
Exports of Goods and Services	770,114.8	747,134.3	709,122.0	694,216.1	745,645.6	43.1
Less Imports of Goods and Services	(698,936.9)	(669,058.0)	(600,239.3)	(581,662.3)	(652,156.8)	(37.7)
Statistical Discrepancy	—	—	(3,079.4)	1,074.9	1,595.5	0.1
Expenditures on Gross Domestic Product	1,429,445.4	1,486,079.3	1,564,123.9	1,641,786.0	1,730,398.5	100.0
Net Factor Income from the Rest of the World	10,199.0	4,684.5	4,259.2	4,422.8	62.9	0.0
Gross National Income (2)	1,439,644.4	1,490,763.9	1,568,383.1	1,646,208.9	1,730,461.4	100.0
Gross Domestic Product at Chained 2010 Year Prices:						
Private	680,349.5	692,236.0	707,492.7	725,362.3	744,284.4	47.8
Government	199,783.4	205,869.2	212,021.6	221,514.2	229,100.7	14.7
Gross Capital Formation	409,153.8	430,685.5	462,114.3	488,039.9	537,370.0	34.5
Exports of Goods and Services	788,788.0	804,797.1	803,746.1	824,330.0	840,019.9	54.0
Less Imports of Goods and Services	(696,724.6)	(706,938.4)	(721,740.4)	(755,861.0)	(808,985.5)	(52.0)
Statistical Discrepancy	(172.8)	1,019.1	2,481.2	3,261.9	3,366.9	0.2
Expenditures on Gross Domestic Product (3)	1,380,832.6	1,426,972.4	1,466,788.3	1,509,755.0	1,555,995.3	100.0
Net Factor Income from the Rest of the World in the Terms of Trade	10,037.5	4,706.4	4,249.8	4,293.6	261.0	0.0
Trading Gains and Losses from Changes in the Terms of Trade	(19,138.8)	(14,000.4)	38,787.9	59,905.0	65,729.0	4.2
Gross National Income (4)	1,371,733.1	1,417,814.2	1,510,005.6	1,574,137.3	1,622,212.6	104.3
Percentage Increase (Decrease) of GDP over Previous Year At Current Prices	3.8	4.0	5.3	5.0	5.4	
At Chained 2010 Year Prices	2.9	3.3	2.8	2.9	3.1	

(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 to the total GDP.

(4) Under the "chain-linked" measure of Gross National Income, the components of Gross National Income will not necessarily add 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)

	2013	2014	2015	2016	2017 (1)	As % of GDP 2017 (1)
			(billions of Won)			
Industrial Sectors:	531,054.1	547,231.2	578,352.0	608,403.1	654,616.6	37.8
Agriculture, Forestry and Fisheries	30,437.2	31,560.3	32,612.2	31,647.0	33,935.4	2.0
Mining and Manufacturing	406,127.7	411,030.4	426,228.8	442,502.4	479,927.3	27.7
Mining and Quarrying	2,471.0	2,520.2	2,577.1	2,802.1	2,815.2	0.2
Manufacturing	403,656.7	408,510.2	423,651.7	439,700.3	477,112.1	27.6
Electricity, Gas and Water Supply	30,238.7	37,373.8	44,988.9	49,879.4	47,531.0	2.7
Construction	64,250.5	67,266.7	74,522.1	84,374.3	93,222.9	5.4
Services:	772,184.1	807,624.1	845,294.8	882,458.9	914,424.9	52.8
Wholesale and Retail Trade, Restaurants and Hotels	150,251.9	152,205.2	156,363.1	164,350.4	168,423.0	9.7
Transportation and Storage	46,772.0	50,306.8	56,154.6	59,230.7	56,987.2	3.3
Finance and Insurance	72,478.1	75,859.8	78,699.7	81,075.7	85,784.4	5.0
Real Estate and Leasing	103,527.1	109,549.0	114,618.7	118,359.9	122,262.5	7.1
Information and Communication	50,589.2	52,510.8	54,257.2	56,710.7	57,581.0	3.3
Business Activities	94,758.4	100,936.7	106,944.2	110,894.2	115,417.2	6.7
Public Administration and Defense	93,776.3	98,333.5	102,848.3	107,601.0	114,832.9	6.6
Education	71,599.3	74,007.8	76,237.2	77,664.4	79,432.7	4.6
Health and Social Work	52,851.5	57,129.7	61,980.4	68,100.9	74,356.4	4.3
Cultural and Other Services	35,580.3	36,784.7	37,191.4	38,471.0	39,347.6	2.3
Taxes Less Subsidies on Products	126,207.2	131,224.0	140,477.2	150,924.2	161,356.9	9.3
Gross Domestic Product at Current Market Prices	1,429,445.4	1,486,079.3	1,564,123.9	1,641,786.0	1,730,398.5	100.0
Net Factor Income from the Rest of the World	10,199.0	4,684.5	4,259.2	4,422.8	62.9	0.0
Gross National Income at Current Market Price	1,439,644.4	1,490,763.9	1,568,383.1	1,646,208.9	1,730,461.4	100.0

(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)

	2013	2014	2015	2016	2017 (1)
GDP per capita (thousands of Won)	28,346	29,284	30,660	32,038	33,635
GDP per capita (U.S. dollar)	25,886	27,805	27,097	27,607	29,744
Average Exchange Rate (in Won per U.S. dollar)	1,095.0	1,053.2	1,131.5	1,160.5	1,130.8

(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)

	2013	2014	2015	2016	2017 (1)
GNI per capita (thousands of Won)	28,548	29,377	30,744	32,124	33,636
GNI per capita (U.S. dollar)	26,070	27,892	27,171	27,681	29,745
Average Exchange Rate (in Won per U.S. dollar)	1,095.0	1,053.2	1,131.5	1,160.5	1,130.8

(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)

	2013	2014	2015	2016	2017 (1)	As % of GDP 2017 (1)
			(billions of Won)			
Industrial Sectors:	510,804.1	527,016.1	538,722.4	554,601.8	578,793.5	37.2
Agriculture, Forestry and Fisheries	28,357.7	29,378.2	29,251.4	28,441.6	28,530.8	1.8
Mining and Manufacturing	399,773.1	413,839.1	421,057.7	430,968.9	449,524.2	28.9
Mining and Quarrying	2,347.1	2,344.40	2,314.5	2,357.1	2,261.5	0.1
Manufacturing	397,426.0	411,494.7	418,743.2	428,611.8	447,262.7	28.7
Electricity, Gas and Water Supply	26,629.2	27,327.9	28,722.1	29,495.0	30,399.3	2.0
Construction	56,044.1	56,470.9	59,691.2	65,696.3	70,339.2	4.5
Services:	739,463.1	763,853.5	785,323.3	806,312.4	823,800.7	52.9
Wholesale and Retail Trade, Restaurants and Hotels	145,620.3	149,150.5	152,013.0	156,323.0	157,472.7	10.1
Transportation and Storage	47,556.1	48,646.9	49,486.3	50,616.8	51,765.3	3.3
Finance and Insurance	78,583.9	83,020.5	88,568.7	90,844.7	94,249.9	6.1
Real Estate and Leasing	93,999.5	97,112.9	98,773.8	99,559.1	100,496.5	6.5
Information and Communication	52,773.2	55,164.8	56,532.2	58,282.1	59,743.4	3.8
Business Activities	87,244.6	91,424.0	95,713.9	97,986.2	99,948.1	6.4
Public Administration and Defense	85,024.5	87,052.8	88,495.2	90,625.4	93,008.8	6.0
Education	64,773.0	64,865.2	65,158.4	65,234.3	65,574.5	4.2
Health and Social Work	51,247.1	54,740.1	58,653.1	63,157.9	67,738.3	4.4
Cultural and Other Services	32,683.2	33,106.0	32,999.7	33,682.9	33,803.2	2.2
Taxes Less Subsidies on Products	130,627.4	136,454.6	142,688.3	149,817.1	154,793.8	9.9
Gross Domestic Product at Chained 2010 Year Prices (2)	1,380,832.6	1,426,972.4	1,466,788.3	1,509,755.0	1,555,995.3	100.0

(1) Preliminary.
(2) Under the "chain-linked" measure of GDP, the components of GDP will not necessarily add to the total GDP.
Source: The Bank of Korea.

GDP growth in 2013 was 2.9% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 2.2%, exports of goods and services increased by

4.3% and gross domestic fixed capital formation increased by 3.3%, which more than offset an increase in imports of goods and services by 1.7%, each compared with 2012.

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 the first quarter of 2018 was 2.8% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 4.0%, gross domestic fixed capital formation increased by 3.7% and exports of goods and services increased by 1.6%, which more than offset an increase in imports of goods and services by 4.2%, each compared with the corresponding period of 2017. Based on preliminary data, GDP growth in the second quarter of 2018 was 2.9% at chained 2010 year prices, as aggregate private and general government consumption expenditures increased by 3.3% and exports of goods and services increased by 5.2%, which more than offset a decrease in gross domestic fixed capital formation by 1.1% and an increase in imports of goods and services by 2.4%, each compared with the corresponding period of 2017.

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)	2013	2014	2015	2016	2017 (2)
All Industries	10,000.0	100.1	100.3	100.0	102.3	104.2
Mining and Manufacturing	9,611.6	100.0	100.2	100.0	102.4	104.0
Mining	33.9	106.9	98.5	100.0	101.4	107.9
Petroleum, Crude Petroleum and Natural Gas	8.7	145.9	120.4	100.0	96.8	86.8
Metal Ores	0.9	124.7	126.6	100.0	95.0	84.0
Non-metallic Minerals	24.3	99.1	93.6	100.0	102.7	113.3
Manufacturing	9,577.7	100.0	100.3	100.0	102.4	104.0
Food Products	434.4	97.2	98.2	100.0	102.4	103.0
Beverage Products	82.4	96.1	97.2	100.0	103.7	105.3
Tobacco Products	43.2	100.2	107.9	100.0	113.0	122.4
Textiles	160.6	108.7	106.6	100.0	98.0	94.9
Wearing Apparel, Clothing Accessories and Fur Articles	145.2	111.0	104.0	100.0	95.9	96.8
Tanning and Dressing of Leather, Luggage and Footwear	42.1	107.4	105.9	100.0	93.1	81.5
Wood and Products of Wood and Cork (Except Furniture)	31.7	100.4	96.4	100.0	101.6	106.2
Pulp, Paper and Paper Products	126.8	99.4	101.1	100.0	99.4	97.5
Printing and Reproduction of Recorded Media	50.2	102.9	102.7	100.0	101.7	101.4
Coke, hard-coal and lignite fuel briquettes and Refined Petroleum Products	471.0	89.7	94.3	100.0	106.3	110.9
Chemicals and Chemical Products	847.5	97.0	97.8	100.0	105.6	109.2
Pharmaceuticals, Medicinal Chemicals and Botanical Products	144.1	96.7	98.1	100.0	109.2	117.8
Rubber and Plastic Products	421.1	99.4	100.1	100.0	100.5	99.9
Non-metallic Minerals	271.7	97.4	93.8	100.0	109.2	111.3
Basic Metals	827.6	98.1	101.7	100.0	100.7	100.8
Fabricated Metal Products	557.8	100.9	104.6	100.0	99.3	94.3
Electronic Components, Computer, Radio, Television and Communication Equipment and Apparatuses	1,794.3	100.4	98.7	100.0	107.0	110.9
Medical, Precision and Optical Instruments, Watches and Clocks	148.1	115.2	104.2	100.0	101.0	118.1
Electrical Equipment	479.5	101.4	103.4	100.0	103.3	106.5
Other Machinery and Equipment	803.6	102.8	103.2	100.0	101.4	115.5
Motor Vehicles, Trailers and Semitrailers	1,076.4	96.1	98.7	100.0	97.7	94.9
Other Transport Equipment	506.5	123.7	109.9	100.0	89.0	68.7
Furniture	69.5	88.4	94.7	100.0	107.0	112.5
Other Products	42.4	104.0	103.8	100.0	104.4	108.3
Electricity, Gas	388.4	100.0	100.7	100.0	100.8	106.3
Total Index	10,000.0	100.1	100.3	100.0	102.3	104.2

(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 0.7% in 2013, primarily due to increased exports. 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 2.3% in 2016, primarily due to increased domestic consumption. Based on preliminary data, industrial production increased by 1.9% in 2017, primarily due to increased domestic consumption and exports.

Manufacturing

The manufacturing sector increased production by 0.6% in 2013, primarily due to increased demand for consumer electronics products, electronic equipment, chemical products, medical equipment and transport equipment, and 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 2.4% in 2016 and by 1.6% in 2017 (based on preliminary data), primarily due to increased demand for consumer electronics products, electronic components, communication equipment and chemical products, which more than offset decreased demand for motor vehicles, trailers and semitrailers.

Automobiles. In 2013, automobile production decreased by 0.9%, domestic sales volume recorded a decrease of 2.0% and export sales volume recorded a decrease of 2.6%, compared with 2012, primarily due to decreased supply of automobiles resulting mainly from partial strikes by unionized workers of automobile manufacturers in August 2013 and the appreciation of the Won against the U.S. dollar and the Japanese Yen. 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.

Electronics. In 2013, electronics production amounted to ₩325,684 billion, an increase of 3.5% from the previous year, and exports amounted to US$169.4 billion, an increase of 9.1% from the previous year, primarily due to increases in demand for mobile phones in emerging markets and global demand for non-memory semiconductors. In 2013, export sales of semiconductor memory chips constituted approximately 10.2% of the Republic’s total exports. In 2014, electronics production amounted to ₩329,460 billion, an increase of 1.2% from the previous year, and exports amounted to US$173.9 billion, an increase of 2.7% 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 ₩324,162 billion, a decrease of 1.6% 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 4.7% 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. Based on preliminary data, in 2017, electronics production amounted to ₩341,273 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. Based on preliminary data, in 2017, export sales of semiconductor memory chips constituted approximately 17.4% of the Republic’s total exports.

Iron and Steel. In 2013, crude steel production totaled 66.1 million tons, a decrease of 4.4% from 2012, and domestic sales volume and export sales volume of iron and steel products decreased by 4.2% and 4.2%, respectively, primarily due to the appreciation of the Won against the U.S. dollar and the Japanese Yen and excess supply from China. 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. Based on preliminary data, 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.

Shipbuilding. In 2013, the Republic’s shipbuilding orders amounted to approximately 19 million compensated gross tons, an increase of 137.5% compared to 2012, primarily due to increased demand for LNG carriers, bulk carriers and container carriers. 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. Based on preliminary data, in 2017, the Republic’s shipbuilding orders amounted to approximately 6 million compensated gross tons, an increase of 200% compared to 2016, primarily due to increased demand for LNG carriers, bulk carriers 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 2013, the agriculture, forestry and fisheries industry increased by 3.1% compared to 2012, primarily due to an increase in the cultivation and livestock industry. In 2014, the agriculture, forestry and fisheries industry increased by 2.6% 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 2.9% 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 0.4% compared to 2016, primarily due to an increase in aquafarming production.

Construction

In 2013, the construction industry increased by 3.0% compared to 2012, primarily due to an increase in the construction of residential and commercial buildings. In 2014, the construction industry increased by 0.6% 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 10.5% 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 7.2% compared to 2016, primarily due to an increase 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, except ratios)		
2013	280.4	268.3	95.7
2014	283.1	269.5	95.2
2015	287.7	272.7	94.8
2016	294.7	279.1	94.7
2017 (1)	301.1	283.6	94.2

(1) 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, except percentages)									
2013	82.1	29.3	105.8	37.7	29.3	10.4	63.2	22.5	280.4	100.0
2014	84.8	30.0	104.9	37.1	33.0	11.7	60.4	21.3	283.1	100.0
2015	85.7	29.8	109.6	38.1	34.8	12.1	57.6	20.0	287.7	100.0
2016	81.9	27.8	118.1	40.1	34.2	11.6	60.5	20.5	294.7	100.0
2017 (2)	86.3	28.7	119.6	39.7	31.6	10.5	63.6	21.1	301.1	100.0

(1) Includes natural gas, hydroelectric power and renewable energy.
(2) 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, 2017, the Republic had 24 nuclear plants with a total estimated nuclear power installed generating capacity of 22,529 megawatts and five 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.

Services Sector

In 2013, the service industry increased by 2.8% compared to 2012 as the business activities sector increased by 4.7%, the finance and insurance sector increased by 3.6% and the health and social work sector increased by 5.2%, each compared with 2012. In 2014, the service industry increased by 3.1% compared to 2013 as the health and social work sector increased by 7.5%, the finance and insurance sector increased by 5.7% and the business activities sector increased by 4.1%, each compared with 2013. In 2015, the service industry increased by 3.0% 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 2.3% compared to 2015 as the health and social work sector increased by 7.8%, the wholesale and retail trade, restaurants and hotels sector increased by 2.7% and the finance and insurance sector increased by 2.3%, 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 7.9%, the finance and insurance sector increased by 3.5% and the public administration and defense sector increased by 2.5%, each compared with 2016.

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)	(%)	(2010=100)	(%)	(%)
2013	105.7	(1.6)	98.0	1.3	116.4	6.7	3.1
2014	105.2	(0.5)	99.3	1.3	124.3	6.8	3.5
2015	101.0	(4.0)	100.0	0.7	138.0	11.1	3.6
2016	99.1	(1.8)	101.0	1.0	143.6	4.0	3.7
2017	102.5	3.5	102.9	1.9	N/A(4)	N/A(4)	3.7

(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 2013, the inflation rate decreased to 1.3%, primarily due to increased supply of agricultural goods. 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. The inflation rate was 1.3% in the first quarter of 2018 and 1.5% in the second quarter of 2018.

In 2013, the unemployment rate decreased to 3.1%, primarily due to the continued increase in the number of workers employed in the service industry. In 2014, the unemployment rate increased to

3.5%, 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%. The unemployment rate was 4.3% in the first quarter of 2018 and 3.9% in the second quarter of 2018.

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 60% and 64% over the past decade. Literacy among workers under 50 is almost universal. As of December 31, 2017, the economically active population of the Republic was 27.8 million and the number of employees was 26.7 million.

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

	2013	2014	2015	2016	2017
	(all figures in percentages, except as indicated)				
Labor force (in thousands of persons)	25,299	25,897	26,178	26,409	26,725
Employment by Industry:					
Agriculture, Forestry and Fishing	6.0	5.6	5.1	4.9	4.8
Mining and Manufacturing	17.1	17.3	17.6	17.2	17.2
S.O.C & Services	76.9	77.1	77.2	77.9	78.0
Electricity, Transport, Communication and Finance	12.2	11.8	11.8	11.8	11.4
Business, Private & Public Service and Other Services	35.3	35.3	35.4	36.3	36.4
Construction	7.0	7.1	7.0	7.0	7.4
Wholesale & Retail Trade, Hotels and Restaurants	22.4	23.0	23.0	22.9	22.8
Total Employed	100.0	100.0	100.0	100.0	100.0
Employment by Gender:					
Male	58.3	58.0	57.7	57.6	57.5
Female	41.7	42.0	42.3	42.4	42.5
Total Employed	100.0	100.0	100.0	100.0	100.0

Source: The Bank of Korea

On February 28, 2018, the Korean National Assembly passed a bill to amend the Labor Standards Act, pursuant to which the maximum working hours of employees will be 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 will apply to workplaces with 300 or more workers from July 1, 2018, will be extended to workplaces with 50 or more workers from January 1, 2020, and will be further extended to workplaces with 5 or more workers from July 1, 2021.

Approximately 10.3% of the Republic's workers were unionized as of December 31, 2016. 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 August 2013, unionized workers at Hyundai Motor and Kia Motors Corporation ("Kia Motors") went on partial strikes demanding higher wages.

- In December 2013, unionized workers at the state owned Korea Railroad Corporation ("Korail") went on strike against Korail's plan to establish a separate company to operate a new bullet train line fearing that such plan would eventually lead to privatization of Korail and layoffs of existing workers.
- 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 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.

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.

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, or the FSCMA, under which various industry-based capital markets regulatory systems were consolidated into a single regulatory system. The FSCMA, which became effective in February 2009, expands the scope of permitted investment-related financial products and activities through expansive definitions of financial instruments and function-based regulations that allow financial investment companies to offer a wider range of financial services, as well as strengthening investor protection and disclosure requirements.

Prior to the effective date of the FSCMA, separate laws regulated various types of financial institutions depending on the type of the financial institution (for example, securities companies, futures companies, trust business companies and asset management companies) and subjected financial institutions to different licensing and ongoing regulatory requirements (for example, under the Securities and Exchange Act, the Futures 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, 2017, 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 and ₩395 billion in 2017. Taking into account these capital contributions, its total paid-in capital was ₩17,938 billion as of December 31, 2017.

- 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, 2017.

- 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, 2017.

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, 2013	1,441.6	25.7	1.8
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	24.7	1.4
December 31, 2017 (2)	1,775.9	21.0	1.2

(1) Assets classified as substandard or below.
(2) Preliminary.
Source: Financial Supervisory Service.

In 2013, these banks posted an aggregate net profit of ₩3.9 trillion, compared to an aggregate net profit of ₩8.7 trillion in 2012, primarily due to decreased net interest income and increased loan loss provisions. In 2014, these banks posted an aggregate net profit of ₩6.0 trillion, compared to an aggregate net profit of ₩3.9 trillion in 2013, primarily due to decreased loan loss provisions. In 2015, these banks posted an aggregate net profit of ₩3.4 trillion, compared to an aggregate net profit of ₩6.0 trillion in 2014, primarily due to increased loan loss provisions. In 2016, these banks posted an aggregate net profit of ₩1.6 trillion, compared to an aggregate net profit of ₩3.4 trillion in 2015, primarily due to increased loan loss provisions. Based on preliminary data, in 2017, these banks posted an aggregate net profit of ₩10.7 trillion, compared to an aggregate net profit of ₩1.6 trillion in 2016, primarily due to decreased loan loss provisions and increased net 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 December 31, 2017, 79 mutual savings banks, 23 life insurance institutions, which include 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 30, 2013	2,011.3
January 29, 2014	1,941.2
February 28, 2014	1,980.0
March 31, 2014	1,985.6
April 30, 2014	1,961.8
May 30, 2014	1,995.0
June 30, 2014	2,002.2
July 31, 2014	2,076.1
August 29, 2014	2,068.5
September 30, 2014	2,020.1
October 31, 2014	1,964.4
November 28, 2014	1,980.8
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	2,295.3
August 31, 2018	2,322.9
September 28, 2018	2,343.1

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 2,309.6 on October 2, 2018.

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 Services Commission. 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%, in response to signs of inflationary pressures and the continued growth of the global and domestic economy.

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,				
	2013	2014	2015	2016	2017
			(billions of Won)		
Money Supply (M1) [1]	515,643.4	585,822.6	708,452.9	795,531.1	849,862.4
Quasi-money [2]	1,405,151.6	1,491,411.4	1,538,922.1	1,611,928.0	1,680,491.2
Money Supply (M2) [3]	1,920,795.0	2,077,234.0	2,247,375.0	2,407,459.1	2,530,353.6
Percentage Increase Over Previous Year	4.6%	8.1%	8.2%	7.1%	5.1%

(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, 2013	1,055.3
January 29, 2014	1,079.2
February 28, 2014	1,067.7
March 31, 2014	1,068.8
April 30, 2014	1,031.7
May 30, 2014	1,021.6
June 30, 2014	1,014.4
July 31, 2014	1,024.3
August 29, 2014	1,013.6
September 30, 2014	1,050.6
October 31, 2014	1,054.0
November 28, 2014	1,101.1
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
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

	Won/U.S. Dollar Exchange Rate
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

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 ₩1,110.9 to US$1.00 on October 2, 2018.

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	2013	2014	2015	2016	2017 [4]
			(millions of dollars)		
Current Account	81,148.2	84,373.0	105,939.6	99,243.0	78,460.2
Goods	82,781.0	88,885.4	122,269.2	118,895.4	119,888.7
Exports [2]	618,156.9	613,020.6	542,881.2	511,947.3	577,381.4
Imports [2]	535,375.9	524,135.2	420,612.0	393,051.9	457,492.7
Services	(6,499.2)	(3,678.5)	(14,916.8)	(17,737.4)	(34,472.2)
Income	9,055.7	4,150.8	3,572.4	3,851.7	122.0
Current Transfers	(4,189.3)	(4,984.7)	(4,985.2)	(5,766.7)	(7,078.3)
Capital and Financial Account	80,077.6	89,325.1	106,239.0	102,520.6	87,069.1
Capital Account	(27.0)	(8.9)	(60.2)	(46.2)	(31.3)
Financial Account [3]	80,104.6	89,334.0	106,299.2	102,566.8	87,100.4
Net Errors and Omissions	(1,016.6)	4,969.9	419.8	3,370.0	8,671.5

(1) Figures are prepared 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.
(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 Republic recorded a current account surplus of approximately US$105.9 billion in 2015. The current account surplus in 2015 increased from the current account surplus of US$84.4 billion in 2014, primarily due to an increase in surplus from the goods account which more than offset an increase in deficit from the services account. The Republic recorded a current account surplus of approximately US$99.2 billion in 2016. The current account surplus in 2016 decreased from the current account surplus of US$105.9 billion in 2015, primarily due to a decrease in surplus from the goods account and an increase in deficit from the service account. Based on preliminary data, the Republic recorded a current account surplus of approximately US$78.5 billion in 2017. The current account surplus in 2017 decreased from the current account surplus of US$99.2 billion in 2016, primarily due to an increase in deficit from the service account which more than offset an increase in surplus from the goods account. Based on preliminary data, the Republic recorded a current account surplus of approximately US$29.7 billion in the first half of 2018. The current account surplus in the first half of 2018 decreased from the current account surplus of US$36.6 billion in the corresponding period of 2017, primarily due to an increase in deficit from the current transfers account and a decrease in surplus from the goods 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

	2013	2014	2015	2016	2017
			(billions of dollars)		
Contracted and Reported Investment					
Greenfield Investment [1]	9.6	11.0	14.1	15.0	15.7
Merger & Acquisition	5.0	8.0	6.8	6.3	7.2
Total	14.5	19.0	20.9	21.3	22.9
Actual Investment	9.9	12.1	16.5	10.6	13.3 [2]

(1) Includes building new factories and operational facilities.
(2) Preliminary.
Source: Ministry of Trade, Industry and Energy

In 2016, the contracted and reported amount of foreign direct investment in the Republic increased to US$21.3 billion from US$20.9 billion in 2015, primarily due to an increase in foreign investment in (i) the service sector to US$15.5 billion in 2016 from US$14.7 billion in 2015 and (ii) the manufacturing sector to US$5.0 billion in 2016 from US$4.6 billion in 2015, which more than offset a decrease in foreign investment in the electricity, gas and construction sector to US$0.7 billion in 2016 from US$1.6 billion in 2015.

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.

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

	2013	2014	2015	2016	2017
			(billions of dollars)		
North America					
U.S.A.	3.5	3.6	5.5	3.9	4.7
Others	1.1	1.4	2.9	1.4	1.6
	4.6	5.0	8.4	5.3	6.3
Asia					
Japan	2.7	2.5	1.7	1.2	1.8
Hong Kong	1.0	1.1	1.5	2.1	1.8
Singapore	0.4	1.7	2.5	2.3	1.8
China	0.5	1.2	2.0	2.0	0.8
Others	0.4	0.3	0.7	0.5	2.0
	5.0	6.8	8.4	8.1	8.2

	2013	2014	2015	2016	2017
			(billions of dollars)		
European Union					
Malta	1.8	0.4	0.7	4.1	1.1
Netherlands	0.6	2.4	0.5	1.5	1.7
England	0.1	0.4	0.3	0.4	2.2
Germany	0.4	0.2	0.5	0.3	0.7
France	0.5	0.2	0.1	0.2	0.3
Luxembourg	0.7	1.9	0.2	0.2	0.2
Others	0.8	1.2	0.4	0.8	1.1
	4.9	6.7	2.7	7.5	7.3
Other regions and countries	0.0	0.5	1.4	0.4	1.1
Total	14.5	19.0	20.9	21.3	22.9

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)			
2013	559.6	44.4%	515.6	40.9%	44.0	108.5
2014	572.7	44.1%	525.5	40.5%	47.2	109.0
2015	526.8	42.1%	436.5	34.9%	90.3	120.7
2016	495.4	39.7%	406.2	32.5%	89.2	122.0
2017 (4)	573.7	36.9%	478.5	30.8%	95.2	119.9

(1) These entries are derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods includes insurance and freight cost.
(2) At chained 2010 year prices.
(3) These entries are derived from customs clearance statistics on a C.I.F. basis, meaning that the price of goods includes insurance and freight cost.
(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)

	2013	As % of 2013 Total	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017 (2)	As % of 2017 Total (2)
	(billions of dollars, except percentages)									
Foods & Consumer Goods	6.7	1.1	7.0	1.2	6.8	1.3	7.4	1.5	7.8	1.4
Raw Materials and Fuels	61.2	10.9	59.2	10.3	39.5	7.5	33.0	6.7	43.1	7.5
Petroleum & Derivatives	53.2	9.5	51.2	8.9	32.4	6.1	26.8	5.4	35.4	6.2
Others	8.0	1.4	8.0	1.4	7.1	1.3	6.2	1.3	7.7	1.3
Light Industrial Products	39.0	6.9	38.6	6.7	35.4	6.7	35.4	7.1	36.0	6.3
Heavy & Chemical Industrial Products	452.8	77.8	467.9	81.7	445.1	84.5	419.7	84.7	486.8	84.9
Electronic & Electronic Products	171.2	30.6	174.4	30.5	170.5	32.4	159.4	32.2	192.0	33.5
Chemicals & Chemical Products	64.4	11.5	65.6	11.5	55.9	10.6	55.3	11.2	65.7	11.5
Metal Goods	43.6	7.8	47.5	8.3	41.4	7.9	39.9	8.1	46.9	8.2
Machinery & Precision Equipment	55.3	9.9	57.9	10.1	57.3	10.9	55.2	11.1	63.3	11.0
Transport Equipment	113.1	20.2	116.5	20.3	112.8	21.4	101.0	20.4	108.8	19.0
Passenger Cars	44.3	7.9	44.8	7.8	41.7	7.9	37.5	7.6	38.8	6.8
Ship & Boat	36.2	6.5	38.7	6.8	38.8	7.4	33.5	6.8	41.4	7.2
Others	32.6	5.8	33.0	5.8	32.3	6.1	30.0	6.1	28.6	5.0
Others	5.2	0.9	6.0	1.0	7.2	1.4	8.9	1.8	10.1	1.8
Total	559.6	100.0	572.7	100.0	526.8	100.0	495.4	100.0	573.7	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)

	2013	As % of 2013 Total	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017 (2)	As % of 2017 Total (2)
	(billions of dollars, except percentages)									
Industrial Materials and Fuels	313.8	60.9	311.2	59.2	219.0	50.2	191.0	47.0	233.1	48.7
Crude Petroleum	99.4	19.3	94.9	18.1	55.1	12.6	44.3	10.9	59.6	12.5
Mineral	24.7	4.8	24.6	4.7	17.6	4.0	15.5	3.8	20.3	4.2
Chemicals	43.2	8.4	43.9	8.4	39.6	9.1	39.1	9.6	44.0	9.2
Iron & Steel Products	24.6	4.8	27.0	5.1	21.2	4.9	18.9	4.7	20.3	4.2
Non-ferrous Metal	12.5	2.4	12.8	2.4	11.6	2.7	10.7	2.6	12.1	2.5
Others	109.4	21.2	108.0	20.5	74.0	16.9	62.5	15.4	76.8	16.1
Capital Goods	144.2	28.0	149.0	28.3	150.8	34.5	147.8	36.4	171.8	35.9
Machinery & Precision Equipment	50.1	9.7	50.8	9.7	49.1	11.2	47.8	11.8	63.1	13.2
Electric & Electronic Machines	80.9	15.7	84.5	16.1	87.5	20.0	84.9	20.9	95.8	20.0
Transport Equipment	11.3	2.2	11.6	2.2	12.4	2.8	13.0	3.2	10.8	2.3

	2013	As % of 2013 Total	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017 (2)	As % of 2017 Total (2)
	(billions of dollars, except percentages)									
Others	1.9	0.4	2.1	0.4	1.9	0.4	2.1	0.5	2.1	0.4
Consumer Goods	58.2	11.3	65.3	12.4	66.7	15.3	67.4	16.6	73.6	15.4
Cereals	8.5	1.6	7.9	1.5	6.9	1.6	6.2	1.5	6.0	1.3
Goods for Direct Consumption	14.5	2.8	16.7	3.2	17.1	3.9	17.8	4.4	19.7	4.1
Consumer Durable Goods	21.0	4.1	24.7	4.7	26.6	6.1	27.0	6.6	30.0	6.3
Consumer Nondurable Goods	14.3	2.8	16.0	3.0	16.0	3.7	16.4	4.0	17.9	3.7
Total	515.6	100.0	525.5	100.0	436.5	100.0	406.2	100.0	478.5	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 2013, the Republic recorded a trade surplus of US$44.1 billion. Exports increased by 2.1% to US$559.7 billion in 2013 from US$547.9 billion in 2012, primarily due to increased demand for wireless communication devices, semiconductors and other information technology related products from the United States, China and the Southeast Asian nations. Imports decreased by 0.8% to US$515.6 billion in 2013 from US$519.6 billion in 2012, primarily due to decreased imports of oil, iron and steel.

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.

Based on preliminary data, the Republic recorded a trade surplus of US$95.2 billion in 2017. 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$32.1 billion in the first half of 2018. Exports increased by 6.5% to US$297.2 billion and imports increased by 13.2% to

US$265.1 billion from US$279.1 billion of exports and US$234.2 billion of imports, respectively, in the corresponding period of 2017.

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

Exports

	2013	As % of 2013 Total	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017 (1)	As % of 2017 Total (1)
	(millions of dollars, except percentages)									
China	145,869.5	26.1	145,287.7	25.4	137,123.9	26.0	124,432.9	25.1	142,120.0	24.8
United States	62,052.5	11.1	70,284.9	12.3	69,832.1	13.3	66,462.3	13.4	68,609.7	12.0
Japan	34,662.3	6.2	32,183.8	5.6	25,576.5	4.9	24,355.0	4.9	26,816.1	4.7
Hong Kong	27,756.3	5.0	27,256.4	4.8	30,418.2	5.8	32,782.4	6.6	39,112.3	6.8
Singapore	22,289.0	4.0	23,749.9	4.1	15,011.2	2.8	12,458.9	2.5	11,651.9	2.0
Vietnam	21,087.6	3.8	22,351.7	3.9	27,770.8	5.3	32,630.5	6.6	47,753.8	8.3
Taiwan	15,699.1	2.8	15,077.4	2.6	12,004.3	2.3	12,220.5	2.5	14,898.4	2.6
India	11,375.8	2.0	12,782.5	2.2	12,029.6	2.3	11,596.3	2.3	15,055.5	2.6
Indonesia	11,568.2	2.1	11,360.7	2.0	7,872.4	1.5	6,608.5	1.3	8,403.7	1.5
Mexico	9,727.4	1.7	10,846.0	1.9	10,891.9	2.1	9,720.8	2.0	10,932.6	1.9
Australia	9,563.1	1.7	10,282.5	1.8	10,830.6	2.1	7,500.7	1.5	19,861.6	3.5
Russia	11,149.1	2.0	10,129.2	1.8	4,685.7	0.9	4,768.8	1.0	6,906.6	1.2
Germany	7,907.9	1.4	7,570.9	1.3	6,220.2	1.2	6,443.0	1.3	8,483.8	1.5
Others (2)	168,924.6	30.2	173,501.0	30.3	156,489.1	29.7	143,445.3	29.0	153,088.4	26.7
Total	559,632.4	100.0	572,664.6	100.0	526,756.5	100.0	495,425.9	100.0	573,694.4	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

	2013	As % of 2013 Total	2014	As % of 2014 Total	2015	As % of 2015 Total	2016	As % of 2016 Total	2017 (1)	As % of 2017 Total (1)
	(millions of dollars, except percentages)									
China	83,052.9	16.1	90,082.2	17.1	90,250.3	20.7	86,980.1	19.9	97,860.1	20.5
Japan	60,029.4	11.6	53,768.3	10.2	45,853.8	10.5	47,466.6	10.9	55,124.7	11.5
United States	41,511.9	8.1	45,283.3	8.6	44,024.4	10.1	43,215.9	9.9	50,749.4	10.6
Saudi Arabia	37,665.2	7.3	36,694.5	7.0	19,561.5	4.5	15,741.7	3.6	19,590.5	4.1
Qatar	25,873.8	5.0	25,723.1	4.9	16,474.8	3.8	10,081.3	2.3	11,267.1	2.4
Australia	20,784.6	4.0	20,413.0	3.9	16,437.8	3.8	15,175.9	3.5	19,159.7	4.0
Germany	19,336.0	3.8	21,298.8	4.0	20,956.5	4.8	18,917.0	4.3	19,748.7	4.1
Kuwait	18,725.1	3.6	16,892.0	3.2	8,973.4	2.1	7,262.3	1.7	9,594.0	2.0
Taiwan	14,632.6	2.8	15,689.8	3.0	16,653.9	3.8	16,403.1	3.8	18,073.0	3.8
United Arab Emirates	18,122.9	3.5	16,194.3	3.1	8,614.7	2.0	6,941.1	1.6	9,557.1	2.0
Indonesia	13,190.0	2.6	12,266.3	2.3	8,850.4	2.0	8,285.3	1.9	9,571.0	2.0
Malaysia	11,095.8	2.2	11,097.9	2.1	8,609.4	2.0	7,507.8	1.7	8,714.7	1.8
Others (2)	151,565.3	29.4	160,111.0	30.5	131,238.1	30.1	122,214.8	34.9	149,468.3	31.2
Total	515,585.5	100.0	525,514.5	100.0	436,499.0	100.0	406,192.9	100.0	478,478.3	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 MERS resulted in the death of over 30 people and the quarantine of thousands. In September 2018, a case of MERS reappeared, leading to the quarantine of over 20 people. The case was contained and the Government announced the effective end to the MERS alert as of September 27, 2018. However, there is no guarantee that another outbreak of MERS or similar incidents will not occur in the future, which 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.

Non-Commodities Trade Balance

The Republic had a non-commodities trade deficit of US$1.6 billion in 2013, a non-commodities trade deficit of US$4.5 billion in 2014, a non-commodities trade deficit of US$16.3 billion in 2015 and a non-commodities trade deficit of US$19.7 billion in 2016. Based on preliminary data, the Republic had a non-commodities trade deficit of US$41.4 billion in 2017.

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,				
	2013	2014	2015	2016	2017
	(millions of dollars)				
Gold	$ 4,794.5	$ 4,794.7	$ 4,794.7	$ 4,794.7	$ 4,794.7
Foreign Exchange (1)	335,647.5	353,600.5	358,513.8	361,701.4	379,476.6
Total Gold and Foreign Exchange	340,442.0	358,395.2	363,308.5	366,496.1	384,271.3
Reserve Position at IMF	2,527.7	1,917.1	1,411.8	1,727.5	1,621.1
Special Drawing Rights	3,489.9	3,280.5	3,241.4	2,878.0	3,374.3
Total Official Reserves	$346,459.6	$363,592.7	$367,961.9	$371,101.6	$389,266.7

(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$346.5 billion as of December 31, 2013, 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 and US$389.3 billion as of December 31, 2017, primarily due to continued trade surpluses and capital inflows. The amount of the Government's foreign currency reserve was US$402.5 billion as of July 31, 2018.

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.

2016 budgeted revenues increased by 6.8% to ₩369.9 trillion from ₩346.4 trillion in 2015, led by an increase in budgeted tax revenues (including revenues from social security contributions and income tax). 2016 budgeted expenditures and net lending increased by 4.0% to ₩367.4 trillion from ₩353.4 trillion in 2015, led by increases in budgeted expenditures on economic growth (including research and development), welfare services for senior citizens, unemployed people and temporary workers, promotion of cultural industries, military services, public assistance, child care and education. The 2016 budget anticipated a ₩2.5 billion budget surplus.

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.

The following table shows consolidated Government revenues and expenditures:

Consolidated Central Government Revenues and Expenditures

	Actual					Budget		
	2013	2014	2015	2016	2017 (1)	2016	2017	2018
				(billions of Won)				
Total Revenues	314,438	320,895	339,186	371,264	403,839	369,913	391,175	416,085
Current Revenues	311,136	318,185	335,911	367,888	400,659	365,782	387,376	413,304
Total Tax Revenues	248,046	255,313	270,974	299,451	325,845	293,269	313,086	337,402
Taxes on income, profits and capital gains	91,674	95,976	105,751	120,612	134,242	114,680	126,847	135,942
Social security contributions	46,140	49,793	53,089	56,889	60,460	60,530	62,010	69,273
Tax on property	8,591	9,054	11,113	11,112	12,945	10,303	11,459	11,931
Taxes on goods and services	77,642	79,055	79,442	89,221	95,535	86,549	90,282	97,390
Taxes on international trade and transaction	10,562	8,721	8,495	8,045	8,529	8,292	8,991	9,418
Other tax	13,438	12,715	13,084	13,571	14,133	12,915	13,498	13,450
Non-Tax Revenues	63,089	62,872	64,936	68,437	74,814	72,513	74,290	75,902
Operating surpluses of departmental enterprise sales and property income	24,591	23,112	22,129	24,489	27,692	25,920	26,981	27,154
Administration fees & charges and non-industrial sales	8,537	7,997	8,664	8,469	9,067	8,578	8,978	9,460
Fines and forfeits	18,164	19,556	20,777	22,266	23,769	23,484	22,879	23,140
Contributions to government employee pension fund	8,776	9,915	10,929	11,289	12,311	11,372	12,370	13,200
Current revenue of non-financial public enterprises	3,021	2,292	2,437	1,924	1,974	3,159	3,082	2,947
Capital Revenues	3,302	2,710	3,276	3,376	3,180	4,131	3,800	2,781
Total Expenditures and Net Lending	300,238	312,394	339,351	354,354	379,809	367,413	378,196	397,739
Total Expenditures	302,036	311,507	330,537	342,612	363,671	352,710	367,705	388,134
Current Expenditures	268,019	280,466	296,216	309,981	332,719	320,293	336,209	358,912
Expenditure on goods and service	57,769	59,616	63,160	65,145	67,536	70,166	71,542	75,281
Interest payment	13,386	14,057	14,056	13,964	13,976	14,434	14,486	14,334

	Actual					Budget		
	2013	2014	2015	2016	2017(1)	2016	2017	2018
	(billions of Won)							
Subsidies and other current transfers	193,451	203,649	216,189	228,349	248,513	232,033	246,987	265,631
Current expenditure of non-financial public enterprises	3,414	3,143	2,810	2,524	2,694	3,661	3,193	3,666
Capital Expenditures	34,017	31,041	34,322	32,631	30,952	32,417	31,496	29,222
Net Lending	(1,798)	888	8,814	11,741	16,138	14,703	10,490	9,605

(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 2013, the Republic recorded total revenues of ₩314.4 trillion and total expenditures and net lending of ₩300.2 trillion. The Republic had a fiscal surplus of ₩14.2 trillion in 2013.

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.

Based on preliminary data, the Republic recorded total revenues of ₩403.8 trillion and total expenditures and net lending of ₩379.8 trillion in 2017. The Republic had a fiscal surplus of ₩24.0 trillion in 2017.

Debt

The Government estimates that the total outstanding debt of the Government (including guarantees by the Government) as of December 31, 2016 amounted to approximately ₩616.1 trillion, an increase of 5.7% over the previous year. 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 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, 2017:

Direct External Debt of the Government

	Amount in Original Currency	Equivalent Amount in U.S. Dollars (1)
	(millions)	
US$	US$4,900.0	US$4,900.0
Chinese Yuan (CNY)	CNY3,000.0	458.2
Euro (EUR)	EUR1,125.0	1,343.2
Total		US$6,701.4

(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, 2017.

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)
2013	453,674.0
2014	493,584.9
2015	547,625.6
2016	584,785.0
2017	619,971.9

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

Guarantees by the Government

	December 31,				
	2013	2014	2015	2016	2017
	(billions of Won)				
Domestic	32,978.5	29,158.4	26,393.8	24,241.6	21,130.5
External (1)	—	—	—	—	—
Total	32,978.5	29,158.4	26,393.8	24,241.6	21,130.5

(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,				
	2013	2014	2015	2016	2017(1)
	(billions of dollars)				
Long-term Liabilities	311.7	307.9	291.7	279.4	302.9
General Government	63.0	65.2	62.8	64.5	78.0
Monetary Authorities	29.2	25.9	20.1	10.8	14.5
Banks	102.2	104.0	103.1	93.8	91.7
Other Sectors	117.4	112.9	105.7	110.3	118.7
Short-term Liabilities	111.8	116.4	104.3	104.7	115.9
General Government	0.0	1.8	2.3	2.5	2.0
Monetary Authorities	10.8	12.2	12.0	6.9	8.1
Banks	77.9	79.9	74.8	78.4	85.1
Other Sectors	23.0	22.5	15.2	16.9	20.7
Total External Liabilities	423.5	424.3	396.1	384.1	418.8

(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

Luxembourg Taxation

The following is a summary of certain material Luxembourg tax consequences of purchasing, owning and disposing of the Securities. It does not purport to be a complete analysis of all possible tax situations that may be relevant to a decision to purchase, own or sell the Securities. It is included herein solely for preliminary information purposes. It is not intended to be, nor should it be construed to be, legal or tax advice. This summary does not allow any conclusion to be drawn with respect to issues not specifically addressed. The following description of Luxembourg tax law is based on the Luxembourg law and regulations in effect and as interpreted by the Luxembourg tax authorities on the date of this Offering Circular. These laws and interpretations are subject to change that may occur after such date, even with retroactive or retrospective effect.

Prospective purchasers of the Securities should consult their own tax advisers as to the particular tax consequences of subscribing, purchasing, holding and disposing of the Securities, including the application and effect of any federal, state or local taxes under the tax laws of Luxembourg and each country of which they are residents or citizens.

Please be aware that the residence concept used under the respective headings below applies for Luxembourg income tax assessment purposes only. Any reference in the present section to a tax, duty, levy impost or other charge or withholding of a similar nature refers to Luxembourg tax law and/or concepts only. Also, please note that a reference to Luxembourg income tax generally encompasses corporate income tax (impôt sur le revenu des collectivités), municipal business tax (impôt commercial communal), a solidarity surcharge (contribution au fonds pour l'emploi) and personal income tax (impôt sur le revenu des personnes physiques). Corporate taxpayers may further be subject to net wealth tax (impôt sur la fortune), as well as other duties, levies and taxes. Corporate income tax, municipal business tax and the solidarity surcharge invariably apply to most corporate taxpayers resident in Luxembourg for tax purposes. Individual taxpayers are generally subject to personal income tax and the solidarity surcharge. Under certain circumstances, where individual taxpayers act in the course of the management of a professional or business undertaking, municipal business tax may apply as well.

Tax Residency

A Holder of Securities will not become resident, nor be deemed to be resident, in Luxembourg solely by virtue of holding and/or disposing of Securities or the execution, performance, delivery and/or enforcement of his/her rights thereunder.

Withholding Tax

Resident Holders of Securities

Under the Luxembourg law dated December 23, 2005, as amended (the "Relibi Law"), a 20% Luxembourg withholding tax is levied as of January 1, 2006 on interest or similar income payments (accrued since July 1, 2005) made by Luxembourg paying agents to or for the immediate benefit of an individual beneficial owner who is resident in Luxembourg. This withholding tax also applies on accrued interest received upon disposal, redemption or repurchase of the Securities. Such withholding tax will be in full discharge of income tax if the beneficial owner is an individual acting in the course of the management of his/her private wealth. Responsibility for the withholding of tax in application of the Relibi Law is assumed by the Luxembourg paying agent within the meaning of the Relibi Law.

Further, Luxembourg resident individuals acting in the course of the management of their private wealth, who are the beneficial owners of interest payments and other similar income made as from January 1, 2008 by a paying agent established outside Luxembourg in a Member State of the

European Union or the European Economic Area may opt for a final 20% levy. In such case, the 20% levy is calculated on the basis of the same amounts as for the payments made by Luxembourg paying agents. The option of the 20% final levy must cover all interest payments made by paying agents to the beneficial owner over the full civil year. The Luxembourg resident individual who is the beneficial owner of interest is responsible for the declaration and the payment of the 20% final levy.

Non-resident Holders of Securities

Under the Luxembourg tax law currently in effect, there is no withholding tax on payments of interest (including accrued but unpaid interest) made to a Luxembourg non-resident Holder of Securities. There is also no Luxembourg withholding tax upon repayment of the principal, sale, refund or redemption of the Securities.

Income Tax

Resident Holders of Securities

Luxembourg resident individuals*.* An individual Holder of Securities, acting in the course of the management of his/her private wealth, is subject to Luxembourg income tax in respect of interest received, redemption premiums or issue discounts under the Securities, except if a final withholding tax has been levied on such payments in accordance with the Law.

Under Luxembourg domestic tax law, gains realized upon the sale, disposal or redemption of the Securities by an individual Holder of Securities, who is a resident of Luxembourg for tax purposes and who acts in the course of the management of his/her private wealth, are not subject to Luxembourg income tax, provided this sale or disposal took place more than six months after the acquisition of the Securities and the Securities do not constitute zero coupon notes.

An individual Holder of Securities, who acts in the course of the management of his/her private wealth and who is a resident of Luxembourg for tax purposes, must further include the portion of the gain corresponding to accrued but unpaid interest income in respect of the Securities in his/her taxable income, insofar as the accrued but unpaid interest is indicated separately in the agreement, except if a final withholding tax or levy has been levied in accordance with the Law.

Luxembourg resident individual Holders of Securities acting in the course of the management of a professional or business undertaking to which the Securities are attributable, must include any interest received or accrued, as well as any gain realized on the sale or disposal of the Securities, in any form whatsoever, in their taxable income for Luxembourg income tax assessment purposes. Taxable gains are defined as the difference between the sale, repurchase or redemption price (including accrued but unpaid interest) and the lower of the cost or book value of the Securities sold or redeemed.

Luxembourg resident companies*.* Luxembourg corporate Holders of Securities must include any interest received or accrued, as well as any gain realized on the sale or disposal of the Securities, in their taxable income for Luxembourg income tax assessment purposes. Taxable gains are defined as the difference between the sale, repurchase or redemption price (including but unpaid interest) and the lower of the cost or book value of the Securities sold or redeemed.

Luxembourg resident companies benefiting from a special tax regime*.* Luxembourg Holders of Securities who benefit from a special tax regime, such as (i) undertakings for collective investment subject to the amended law of December 17, 2010, (ii) specialized investment funds governed by the amended law of February 13, 2007, (iii) family wealth management companies governed by the amended law of May 11, 2007 or (iv) reserved alternative investment funds treated as a specialized investment fund for Luxembourg tax purposes governed by the law of July 23, 2016, are exempt from income taxes in Luxembourg and thus income derived from the Securities, as well as gains realized thereon, are not subject to income taxes.

Non-resident Holders of Securities

Holders of Securities who are non-residents of Luxembourg and who have neither a permanent establishment nor a permanent representative in Luxembourg to which or whom the Securities are attributable are not liable to pay any Luxembourg income tax, irrespective of whether they receive payments of principal or interest (including accrued but unpaid interest) or realize capital gains upon redemption, repurchase, sale, disposal or exchange, in any form whatsoever, of any Securities.

Holders of Securities who are non-residents of Luxembourg and who have a permanent establishment or a permanent representative in Luxembourg to which or whom the Securities are attributable are liable to pay Luxembourg income tax on any interest received or accrued, as well as any reimbursement premium received at maturity and any capital gain realized on the sale or disposal, in any form whatsoever, of the Securities and must include this income in their taxable income for Luxembourg income tax assessment purposes.

Net Wealth Tax

Luxembourg resident Holders of Securities and non-resident Holders of Securities who have a permanent establishment or a permanent representative in Luxembourg to which or whom the Securities are attributable, are subject to Luxembourg net wealth tax on such Securities, except if the Holder of Securities is (i) an individual, (ii) an undertaking for collective investment subject to the amended law of December 17, 2010, (iii), a securitization company governed by the amended law of March 22, 2004, (iv) a company governed by the amended law of June 15, 2004 on venture capital vehicles, (v) a specialized investment fund governed by the amended law of February 13, 2007, (vi) a professional pension institution governed by the amended law of July 13, 2005, (vii) a family wealth management company governed by the amended law of May 11, 2007 or (viii) a reserved alternative investment fund governed by the law of July 23, 2016.

However, (i) a securitization company governed by the amended law of March 22, 2004, (ii) a company governed by the amended law of June 15, 2004 on venture capital vehicles, (iii) a professional pension institution governed by the amended law of July 13, 2005 and (iv) an opaque reserved alternative investment fund treated as a venture capital vehicle governed by the law of July 23, 2016 remain subject to minimum net wealth tax.

Other Taxes

There is no Luxembourg registration tax, stamp duty or any other similar tax or duty payable in Luxembourg by the Holders of Securities as a consequence of the issuance of the Securities, nor will any of these taxes be payable as a consequence of a subsequent transfer, redemption or repurchase of the Securities (except in case of voluntary registration in Luxembourg).

Under Luxembourg tax law, where an individual Holder of Securities is a resident of Luxembourg for inheritance tax purposes at the time of his/her death, the Securities are included in his/her taxable base for inheritance tax purposes. On the contrary, no estate or inheritance taxes are levied on the transfer of the Securities upon death of a Holder of Securities in cases where the deceased was not a resident of Luxembourg for inheritance tax purposes at the time of his/her death. Luxembourg gift tax may be due on a gift or donation of the Securities if the gift is recorded in a deed executed before a Luxembourg notary or otherwise registered in Luxembourg.

UK Taxation

The comments below are of a general nature and are based on current UK tax law (as applied in England) and published practice of HM Revenue & Customs ("HMRC"), the UK tax authorities. Such law may be repealed, revoked or modified and such practice may not bind HMRC and/or may change (in each case, possibly with retrospective effect), resulting in UK tax consequences different from those discussed below. The comments apply only to persons who are the absolute beneficial owners of the Securities and may not apply to certain classes of person such as dealers or certain professional investors and persons connected with the Issuer and, save as specifically mentioned, apply only to Holders who are resident and (in the case of individuals) ordinarily resident and domiciled in the UK for tax purposes. The comments below deal only with UK withholding tax and rules relating to information that may need to be provided to HMRC in connection with the Securities. They do not deal with any other UK tax consequences of acquiring, owning or disposing of the Securities. Prospective Holders who may be subject to tax in a jurisdiction other than the UK or who are unsure as to their tax position should seek advice from an independent tax adviser.

Withholding Tax on Interest on the Securities

Payments of interest on the Securities may be made without deduction of or withholding on account of UK income tax if the Securities are and continue to be listed on a "recognised stock exchange" within the meaning of section 1005 of the Income Tax Act 2007. The SGX-ST is a recognised stock exchange for these purposes. Provided that the Securities are and remain admitted to trading on the SGX-ST and are officially listed on the Bond Market of the SGX-ST, interest on the Securities will be payable without deduction of or withholding on account of UK income tax.

If the Securities cease to be so listed at any time, interest will generally be paid by the Issuer under deduction of UK income tax at the basic rate (currently 20%), subject to any direction to the contrary from HMRC in respect of such relief as may be available pursuant to the provisions of any applicable double tax treaty and subject to any other exemption that may be available to particular Holders.

Payments by the Guarantor

If the Guarantor makes any payments in respect of interest on the Securities it is possible that such payments may be subject to deduction of UK income tax at the basic rate (currently 20%), subject to any claim which could be made under an applicable double taxation treaty or any other exemption which may apply. Such payments by the Guarantor may not be eligible for the quoted Eurobonds exemption described above.

Provision of Information Requirements

HMRC has powers to obtain information relating to the Securities in certain circumstances. This may include details of the beneficial owners of the Securities (or the persons for whom the Securities are held), details of the persons to whom payments derived from the Securities are or may be paid and information and documents in connection with transactions relating to the Securities. Information may be required to be provided by, amongst others, the holders of the Securities, persons by or through whom payments derived from the Securities are made or credited or who receive such payments (or who would be entitled to receive such payments if they were made), persons who effect or are a party to transactions relating to the Securities on behalf of others and certain registrars or administrators. In certain circumstances, the information obtained by HMRC may be exchanged with tax authorities in other countries.

Korean Taxation

The following summary of Korean tax considerations applies to non-Korean resident individuals and corporations ("Non-Residents") having no permanent establishment in Korea to which the relevant income is attributable or with which such income is effectively connected. Non-Residents with such a permanent establishment are taxed under different rules.

All payments in respect of the Securities, other than the payment of the principal amount of the Securities under the Guarantee, by the Guarantor to a Non-Resident Securities holder may be subject to a withholding tax at the rate of 22% (including local income tax) or such lower rate as is applicable under the tax treaty between Korea and the country of tax residence of the Non-Resident Securities holder. It is not clear under Korean tax law whether the payment of any interest on the Securities under the Guarantee by the Guarantor to a Non-Resident Securities holder will be subject to the withholding tax. In a ruling by the Korean tax authorities (Jaekukjo-223, May 20, 2011), it was interpreted that the payment of such interest will not be subject to the withholding tax on the basis that the payment of such interest does not fall under the definition of "Korean-source income" under Korean tax law. However, in an administrative appeal case (Joshim 2011Seo1493, December 16, 2011) and a court case by the Supreme Court (2013Du10267, January 14, 2016), it was held that the payment of such interest would be subject to the withholding tax since such payment does fall under the definition of "Korean-source income" under Korean tax law. These interpretations and decisions are in conflict with each other. In the event that the Guarantor is required by Korean law to withhold or deduct any taxes with respect to the payments made by the Guarantor under the Guarantee, the amount of the payment due from the Guarantor shall be increased to an amount which (after making any deduction or withholding) leaves an amount equal to the payment which would have been due if no deduction or withholding had been required.

The Proposed Financial Transaction Tax

The European Commission has published a proposal (the "Commission's Proposal") for a Directive for a common financial transaction tax ("FTT") in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovenia, Slovakia and Spain (the "participating Member States"). However, Estonia has since stated that it will not participate.

The Commission's Proposal has very broad scope and could, if introduced in its current form, apply to certain dealings in the Securities in certain circumstances.

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 Securities 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, the timing of which remains unclear. Additional EU Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

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

SUBSCRIPTION AND SALE

The Hongkong and Shanghai Banking Corporation Limited, Société Générale, Standard Chartered Bank and KEXIM Bank (UK) Limited (the "Managers") have, pursuant to a Subscription Agreement (the "Subscription Agreement") dated October 18, 2018, agreed to subscribe and pay for, or to procure subscriptions and payment for, the principal amount of the Securities 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 Securities. 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 Securities are released for sale, the Managers may change the issue price and other selling terms. The offering of the Securities 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 and their respective subsidiaries, affiliates, jointly controlled entities or associated companies, including the Securities. Such investments and securities may be purchased by or be allocated to any Manager or an affiliate for asset management and/or proprietary purposes but not with a view to distribution.

The Managers or their affiliates may subscribe the Securities for its or their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to the Securities 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 Securities 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 Securities to which this Offering Circular relates (notwithstanding that such selected counterparties may also be subscribers of the Securities).

Selling Restrictions

General

Each Manager has agreed that it will (to the best of its knowledge and belief) comply with all applicable securities laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers Securities 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 Securities under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Manager shall have any responsibility therefor.

If a jurisdiction requires that any offering of Securities be made by a licensed broker or dealer and any Manager or any affiliate of a Manager 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 Securities 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 Securities 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 Securities and the Guarantee during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Securities 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 Securities 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 Securities and the Guarantee, an offer or sale of Securities 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.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “Relevant Member State”), each Manager has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the “Relevant Implementation Date”) it has not made and will not make an offer of Securities which are the subject of the offering contemplated by this Offering Circular to the public in that Relevant Member State other than:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the relevant Manager or Managers nominated by the Issuer for any such offer; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of Securities shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of bonds to the public” in relation to any Securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the Securities to be offered so as to enable an investor to decide to purchase or subscribe the Securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, and the expression "Prospectus Directive" means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU) and includes any relevant implementing measure in the Relevant Member State.

Luxembourg

The Securities are not offered to the public in or from Luxembourg and each Manager has represented and agreed that it will not offer the Securities or cause the offering of the Securities or contribute to the offering of the Securities to the public in or from Luxembourg, unless all the relevant legal and regulatory requirements concerning a public offer in or from Luxembourg have been complied with. In particular, this offer has not been and may not be announced to the public and offering materials may not be made available to the public in Luxembourg.

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 Securities 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 Securities 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 Securities 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 Securities, 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 Securities 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 Securities 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 Securities 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

Each Manager has acknowledged that 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, each Manager has represented and agreed that it has not offered or sold any Securities or caused such Securities to be made the subject of an invitation for subscription or purchase and will not offer or sell such Securities or cause such Securities to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Offering Circular or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of such Securities, 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), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

This Offering Circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under 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 any Securities may not be circulated or distributed, nor may any Securities 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), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where Securities 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 (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Securities 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 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notification under Section 309B(1)(c) of the SFA — The Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Securities 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).

Korea

Each Manager has represented and agreed that a registration statement for the offering and sale of the Securities has not been filed with the Financial Services Commission of Korea (the "FSC") and that under the current laws and regulations of Korea, subject to certain exceptions, the Securities may not be transferred or sold to any resident of Korea (as defined under the Foreign Exchange Transaction Law) unless a registration statement for the offering and sale of the Securities has been filed with the FSC. Accordingly, each Manager has represented and agreed that it has not offered, sold or delivered, and will not offer, sell or deliver, the Securities, directly or indirectly, in Korea or to any resident of Korea (as defined under the Foreign Exchange Transaction Law) or to others for reoffering or resale, directly or indirectly in Korea or for the account or benefit of any resident of Korea (as defined under the Foreign Exchange Transaction Law), except as otherwise permitted by applicable Korean laws and regulations.

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 Securities.

Transfer Restrictions under Korean Law

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

(a) the Issuer has not filed a registration with the Financial Services Commission in Korea and the Securities may not be sold, transferred or assigned to any Korean resident (which term has the meaning given to it by the Foreign Exchange Transaction Law of Korea) within one year after the issuance date of the Securities. Accordingly, it will not sell, transfer, assign or otherwise dispose of any of the Securities that it acquires to any Korean resident during the one year period from the issuance date of the Securities; and

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

Other Transfer Restrictions Applicable to the Securities

The Securities 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 Securities 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 Securities*."

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

(a) The Securities 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 Securities, an offer or sale of Securities 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 Securities 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 Securities 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 SECURITIES EVIDENCED HEREBY (THE "SECURITIES") OF DOOSAN POWER SYSTEMS S.A. (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 SECURITIES AND THE LATEST CLOSING DATE (THE "DISTRIBUTION COMPLIANCE PERIOD"), THE SECURITIES 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 SECURITIES 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 SECURITIES, AFTER WHICH THE SECURITIES 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 SECURITIES 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 SECURITIES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA. ACCORDINGLY, THE SECURITIES 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 KOREAN RESIDENT (AS SUCH TERM IS DEFINED IN THE FOREIGN EXCHANGE TRANSACTIONS LAW OF KOREA) EXCEPT IN CIRCUMSTANCES SPECIFICALLY PERMITTED UNDER APPLICABLE KOREAN LAWS AND REGULATIONS OR WHERE THE RELEVANT KOREAN LAWS AND REGULATIONS DO NOT APPLY.

LEGAL MATTERS

Certain legal matters relating to the issue and sale of the Securities will be passed upon for the Issuer by Arendt & Medernach SA as to matters of Luxembourg law, for the Guarantor by Jipyong LLC as to matters of Korean law, for the Issuer and the Guarantor by Cleary Gottlieb Steen & Hamilton LLP as to matters of New York law and for the Managers by Linklaters LLP as to matters of New York law. Jipyong LLC may rely as to all matters of New York law on the opinion of Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP, and as to all matters of Luxembourg law on the opinion of Arendt & Medernach SA. Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP may rely as to all matters of Luxembourg law on the opinion of Arendt & Medernach SA, and as to all matters of Korean law on the opinion of Jipyong LLC. Arendt & Medernach SA may rely as to all matters of New York law on the opinion of Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP, and as to all matters of Korean law on the opinion of Jipyong LLC.

INDEPENDENT AUDITORS

The annual separate and consolidated financial statements of the Issuer as of and for the year ended December 31, 2016 included in this Offering Circular have been audited by Deloitte Audit S.a r.l., independent auditors. The annual separate and consolidated financial statements of the Issuer as of and for the year ended December 31, 2017 included in this Offering Circular have been audited by Ernst & Young Société anonyme., independent auditors, as stated in their report appearing herein.

The annual separate financial statements of the Guarantor as of and for the year ended December 31, 2016 included in this Offering Circular have been audited by Deloitte Anjin LLC, independent auditors. The annual separate financial statements of the Guarantor as of and for the year ended December 31, 2017 included in this Offering Circular have been audited by KPMG Samjong Accounting Corp., independent auditors, as stated in their report appearing herein.

The interim separate financial statements of the Guarantor as of December 31, 2017 and June 30, 2018 and for the six-month periods ended June 30, 2017 and 2018 included in this Offering Circular have been reviewed by KPMG Samjong Accounting Corp, as stated in their report appearing herein.

INDEX TO FINANCIAL STATEMENTS

Separate and Consolidated Financial Statements of the Issuer

Separate Financial Statements of the Guarantor

Independent auditor's report

To the sole shareholder of
Doosan Power Systems S.A.
6 rue Eugène Ruppert,
L-2453 Luxembourg

Report on the audit of the Company and consolidated financial statements

Opinion

We have audited the standalone consolidated financial statements ("Company financial statements") of Doosan Power Systems S.A. (the "Company") as well as the consolidated financial statements (together referred to as the "financial statements") of the Company and its subsidiaries (together referred to as the "Group"), which comprise the Company and consolidated statement of financial position as at December 31, 2017, and the Company and consolidated statement of comprehensive income, the Company and consolidated statement of changes in equity and the Company and consolidated statement of cash flows for the year then ended and the notes to the Company and consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying Company and consolidated financial statements give a true and fair view of the financial position of the Company and the Group as at December 31, 2017, and of their financial performance and their cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union.

Basis for Opinion

We conducted our audit in accordance with the Law of 23 July 2016 on the audit profession (the "Law of 23 July 2016") and with International Standards on Auditing ("ISAs") as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" ("CSSF"). Our responsibilities under those Law and standards are further described in the "responsibilities of the "réviseur d'entreprises agréé" for the audit of the Company and consolidated financial statements section of our report. We are also independent of the Company and the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants ("IESBA Code") as adopted for Luxembourg by the CSSF together with the ethical requirements that are relevant to our audit of the Company and consolidated financial statements, and have fulfilled our other ethical responsibilities under those ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

The Board of Directors is responsible for the other information. The other information comprises the information included in the Company and consolidated directors' report but does not include the Company and consolidated financial statements and our report of the "réviseur d'entreprises agréé" thereon.

Our opinion on the Company and consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Company and consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Company and consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report this fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and those charged with governance for the Company and consolidated financial statements

The Board of Directors is responsible for the preparation and fair presentation of these Company and consolidated financial statements in accordance with IFRS as adopted by the European Union, and for such internal control as the Board of Directors determines is necessary to enable the preparation of the Company and consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the Company and consolidated financial statements, the Board of Directors is responsible for assessing the Company's / 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 the Board of Directors either intends to liquidate the Company / Group or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the "réviseur d'entreprises agréé" for the audit of the Company and consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the Company and consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report of the "réviseur d'entreprises agréé" that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF 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 Company and consolidated financial statements.

Report of the réviseur d'entreprises agréé

As part of an audit in accordance with the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Company and consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's / Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- Conclude on the appropriateness of Board of Directors' 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 Company's / 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 report of the "réviseur d'entreprises agréé" to the related disclosures in the Company and 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 report of the "réviseur d'entreprises agréé". However, future events or conditions may cause the Company / Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Company and consolidated financial statements, including the disclosures, and whether the Company and 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 and business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

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

Report on other legal and regulatory requirements

The directors' report is consistent with the Company and consolidated financial statements and has been prepared in accordance with applicable legal requirements.

Other matters

The Company and consolidated financial statements of Doosan Power Systems S.A. for the year ended 31 December 2016, prepared in accordance with International Reporting Financial Standards as adopted by the European Union, were audited by Deloitte Audit, Société à responsabilité Limitée, who expressed an unmodified opinion on May 12, 2017.

Ernst & Young
Société anonyme
Cabinet de révision agréé

/s/ Yves Even
Yves Even

Luxembourg, 14 May 2018

Group income statement

For the year ended 31 December 2017

	Note	2017	2016
		£000	£000
Revenue	6	623,830	713,713
Cost of sales		(565,784)	(629,063)
Gross profit		58,046	84,650
Administrative expenses		(70,204)	(96,386)
Operating loss	8	(12,158)	(11,736)
Impairment of investments	14	—	(462)
Impairment of Goodwill	12.1	(12,348)	(21,460)
Impairment of Development expenditure	12.1	(4,670)	—
Profit on disposal of property, plant and equipment		382	27
Other non-operating expenses		(1,762)	(461)
Finance income	10	3,227	47,415
Finance costs	10	(38,624)	(13,948)
Loss before tax		(65,953)	(625)
Taxation	11	(3,255)	(5,895)
Loss for the year		(69,208)	(6,520)
Loss attributable to:			
Owners of the parent		(68,831)	(5,766)
Non-controlling interests		(377)	(754)

All activities are classified as continuing

Company income statement

For the year ended 31 December 2017

	Note	2017	2016
		£000	£000
Revenue		1,604	—
Cost of sales		(3,312)	(426)
Gross result		(1,708)	(426)
Administrative expenses		(1,831)	(2,538)
Operating loss		(3,539)	(2,694)
Distribution from Partnership		1,202	(30)
Impairment of investments	14	—	(72,522)
Finance income	10	3,569	136,763
Finance costs	10	(37,244)	(21,645)
(Loss)/profit before tax		(36,012)	39,602
Taxation		(9)	—
(Loss)/profit for the year		(36,021)	39,602

The notes on pages 16—66 form an integral part of the financial statements

Group statement of other comprehensive income

For the year ended 31 December 2017

	Note	2017	2016
		£000	£000
Loss for the year		(69,208)	(6,520)
Items that will not be reclassified subsequently to profit or loss:			
Revaluation of land	13.1	940	—
Actuarial movement in retirement obligations	9.3/9.4	17,022	(47,028)
Deferred tax relating to items not reclassified	11.3/22	(2,903)	7,177
		15,059	(39,851)
Items that may be reclassified subsequently to profit or loss:			
Currency translation income	11.3	49,447	70,724
Fair value movement of cash flow hedges	15.1.b	8,567	(1,861)
Deferred tax relating to items that may be reclassified	11.3	(1,575)	332
		56,439	69,195
Other comprehensive income for the year net of tax		71,498	29,344
Total comprehensive income for the year		2,290	22,824
Attributable to:			
Owners of the parent		2,667	23,578
Non-Controlling Interest—loss for the year		(377)	(754)
Total comprehensive income for the year		2,290	22,824

Company statement of other comprehensive income

For the year ended 31 December 2017

	Note	2017	2016
		£000	£000
(Loss)/ profit for the year		(36,021)	39,602
Total comprehensive (loss) / income for the year		(36,021)	39,602

The notes on pages 16—66 form an integral part of the financial statements.

Group statement of financial position
As at 31 December 2017

	Note	2017	2016
		£000	£000
Non-current assets			
Intangible assets—goodwill	12.1	386,964	374,550
—other	12.1	30,931	40,110
Property, plant and equipment	13.1	93,004	91,058
Available-for-sale investments	14	323	323
Deferred tax assets	22	28,696	37,017
Derivative financial instruments	15.1.b	1,737	2,675
Trade and other receivables	17	5,829	—
		547,484	545,733
Current assets			
Inventories	16	10,332	9,440
Trade and other receivables	17	115,169	117,796
Amounts due from customers in respect of project work	31	105,238	128,142
Derivative financial instruments	15.1.b	7,494	4,242
Current tax assets		5,215	13,279
Cash and cash equivalents		156,734	166,348
		400,182	439,247
Total assets		947,666	984,980
Current liabilities			
Trade and other payables	18	(195,371)	(212,868)
Amounts due to customers in respect of project work	31	(23,734)	(43,554)
Derivative financial instruments	15.1.b	(24,259)	(3,323)
Borrowings	20	(47,186)	(54,202)
Provisions	21	(3,023)	(14,272)
Current tax liabilities		(160)	(2,187)
		(293,733)	(330,406)
Net current assets		106,449	108,841
Non-current liabilities			
Trade and other payables	19	(127)	(1,528)
Derivative financial instruments	15.1.b	(1,081)	(2,020)
Borrowings	20	(58,196)	(29,287)
Deferred tax liabilities	22	(5,918)	(9,630)
Provisions	21	(8,957)	(8,512)
Retirement benefit obligations	9.3/9.4	(114,812)	(135,683)
		(189,091)	(186,660)
Total liabilities		(482,824)	(517,066)
Net assets		464,842	467,914
Equity			
Called up share capital	23	118,074	118,074
Perpetual bonds	24	191,986	191,986
Other reserves	26	63,332	5,736
Retained earnings	25	92,413	152,691
Non-controlling interests		(963)	(573)
Total equity		464,842	467,914

The notes on pages 16—66 form an integral part of the financial statements.

These financial statements of Doosan Power Systems S.A. were approved and authorised for issue by the Board of Directors on 14 May 2018.

Signed on behalf of the Board of Directors

/s/ Suk Joo Kang
Suk Joo Kang
Director
Registered no: B 125754

Company statement of financial position
As at 31 December 2017

	Note	2017	2016
		£000	£000
Non-current assets			
Property, plant and equipment	13.2	48	61
Investments in controlling stake in partnership	14	3,664	3,664
Investments in subsidiaries	14	735,949	735,949
Derivative financial instruments	15.2.b	916	1,966
		740,577	741,640
Current assets			
Trade and other receivables	17	101,946	75,083
Derivative financial instruments	15.2.b	2,879	3,608
Cash and cash equivalents		15,591	3,489
		120,416	82,180
Total assets		860,993	823,820
Current liabilities			
Trade and other payables	18	(7,332)	(11,294)
Amounts due to customers for project work	31	(3,610)	(2,125)
Borrowings	20	(526,285)	(495,508)
Derivative financial instruments	15.2.b	(24,038)	—
Current tax liabilities		—	(1)
		(561,265)	(508,928)
Net current liabilities		(440,849)	(426,748)
Non-current liabilities			
Trade and other payables	19	—	(1,333)
Derivative financial instruments	15.2.b	—	(737)
Borrowings	20	(57,265)	(28,603)
Provisions for other liabilities and charges		(32)	(32)
		(57,297)	(30,705)
Total liabilities		(618,562)	(539,633)
Net assets		242,431	284,187
Equity			
Called up share capital	23	118,074	118,074
Perpetual bonds	24	191,986	191,986
Other reserves	26	2,195	2,195
Accumulated losses	25	(69,824)	(28,068)
Total equity		242,431	284,187

The notes on pages 16—66 form an integral part of the financial statements.

These financial statements of Doosan Power Systems S.A. were approved and authorised for issue by the Board of Directors on 14 May 2018.

Signed on behalf of the Board of Directors

/s/ Suk Joo Kang
Suk Joo Kang
Director
Registered no: B 125754

Group statement of changes in equity

For the year ended 31 December 2017

	Called up share capital	Perpetual bond	Translation reserve	Hedging reserve*	Statutory reserve**	Legal reserve ***	Revaluation reserve	Retained earnings	Total Owners of the Parent	Non-controlling interest	Total equity
	£000	£000	£000	£000	£000	£000	£000	£000	£000	£000	£000
At 1 January 2016	118,074	192,082	(89,469)	(4,359)	23,777	215	4,397	205,840	450,557	—	450,557
Loss for the year	—	—	—	—	—	—	—	(5,766)	(5,766)	(754)	(6,520)
Other comprehensive (expense) / income for the year	—	—	70,724	(1,529)	—	—	—	(39,851)	29,344	—	29,344
Total comprehensive (expense) / income for the year	—	—	70,724	(1,529)	—	—	—	(45,617)	23,578	(754)	22,824
Set up of Non-Controlling Interest	—	—	—	—	—	—	—	—	—	181	181
Costs associated with issue of perpetual bond	—	(96)	—	—	—	—	—	—	(96)	—	(96)
Statutory reserve	—	—	—	—	—	1,980	—	(1,980)	—	—	—
Perpetual bonds dividend paid	—	—	—	—	—	—	—	(5,552)	(5,552)	—	(5,552)
At 1 January 2017	118,074	191,986	(18,745)	(5,888)	23,777	2,195	4,397	152,691	468,487	(573)	467,914
Loss for the year	—	—	—	—	—	—	—	(68,831)	(68,831)	(377)	(69,208)
Other comprehensive income/(expense) for the year	—	—	49,447	6,992	—	—	771	14,288	71,498	—	71,498
Total comprehensive (expense) / income for the year	—	—	49,447	6,992	—	—	771	(54,543)	2,667	(377)	2,290
Change in Non-Controlling Interest	—	—	—	—	—	—	—	—	—	(13)	(13)
Statutory reserve	—	—	—	—	386	—	—	—	386	—	386
Perpetual bonds dividend paid	—	—	—	—	—	—	—	(5,735)	(5,735)	—	(5,735)
At 31 December 2017	118,074	191,986	30,702	1,104	24,163	2,195	5,168	92,413	465,805	(963)	464,842

The notes on pages 16—66 form an integral part of the financial statements.

* Gains or losses on fair value of foreign exchange hedges which are effective under IAS 39 are taken to the Hedging Reserve. These amounts will be released as and when the hedges mature.

** Included in the Statutory Reserve is an amount which is a legal requirement under Czech law. Each year it must be increased by at least 5% of profit after tax until such time as the reserve represents 10% of the share capital of Doosan Skoda s.r.o. This amount is non-distributable.

*** The Legal Reserve is a legal requirement under Luxembourg law. Each year it must be increased by at least 5% of profit after tax until such time as the reserve represents 10% of the share capital of Doosan Power Systems S.A. This amount is non-distributable.

Company statement of changes in equity

For the year ended 31 December 2017

	Note	Called up share capital	Perpetual Bond	Legal reserve	Accumulated losses	Total
		£000	£000	£000	£000	£000
At 1 January 2016		118,074	192,082	215	(60,138)	250,233
Profit for the year		—	—	—	39,602	39,602
Total comprehensive income for the year		—	—	—	39,602	39,602
Costs associated with issue of perpetual bond	24	—	(96)	—	—	(96)
Perpetual bonds dividends paid		—	—	—	(5,552)	(5,552)
Legal reserve		—	—	1,980	(1,980)	—
At 1 January 2017		118,074	191,986	2,195	(28,068)	284,187
Profit/ (Loss) for the year		—	—	—	(36,021)	(36,021)
Total comprehensive income for the year		—	—	—	(36,021)	(36,021)
Perpetual bonds dividends paid		—	—	—	(5,735)	(5,735)
Legal reserve		—	—	—	—	—
At 31 December 2017		118,074	191,986	2,195	(69,824)	242,431

The notes on pages 16—66 form an integral part of the financial statements.

Group and company statement of cash flows

For the year ended 31 December 2017

	Note	Company 2017	Company 2016	Group 2017	Group 2016
		£000	£000	£000	£000
Cash flows (used in) / generated from operations	27	(3,704)	(83)	(30,521)	(36,917)
Income tax refunded / (paid)		—	—	3,363	(8,351)
Net cash used in operations		(3,704)	(83)	(27,158)	(45,268)
Cash flows from investing activities					
Interest received		2	2	2,860	4,465
Purchase of property, plant and equipment		—	—	(4,869)	(10,401)
Purchase of intangible assets		—	—	(3,299)	(5,717)
Disposal of property, plant and equipment		—	—	566	87
Dividend received from group undertaking		3,567	(30)	—	—
Net cash (used in) / provided by investing activities		3,569	(28)	(4,742)	(11,566)
Cash flows from financing activities					
Interest paid		(2,123)	(3,069)	(4,752)	(7,238)
Repayment of loans from Group undertakings		(41,879)	(67,000)	—	—
Repayment of other borrowings		(4,399)	(33,676)	(5,093)	(118,675)
Proceeds from loan issuance		—	—	18,000	86,284
Loans from Group undertakings		64,668	46,987	—	—
Payments for expenses relating to issue of bond		(2,353)	(2,081)	(2,353)	(2,081)
Maturity of foreign exchange hedges		4,388	38,148	9,651	37,850
Perpetual bond dividend		(5,735)	(5,552)	(5,735)	(5,552)
Net cash (used in)/provided by financing activities		12,567	(26,243)	9,718	(9,412)
Net (decrease)/increase in cash and cash equivalents		12,432	(26,354)	(22,182)	(66,246)
Effects of exchange rate changes		(330)	—	4,709	27,518
Cash and cash equivalents at the beginning of the year		3,489	29,843	166,348	205,076
Cash and cash equivalents at the end of the year		15,591	3,489	148,875	166,348

The notes on pages 16—66 form an integral part of the financial statements.

Notes to the financial statements
For the year ended 31 December 2017

1. General information

Doosan Power Systems S.A. (the "Company", together with its subsidiaries the "Group") is a company incorporated in the Grand Duchy of Luxembourg. The address of the registered office is given on page 6. These financial statements are presented in Pounds Sterling. The functional and presentational currency is determined as per notes 2.6 and 2.7. Foreign operations are included in accordance with the policies set out in note 2.23.d.

2. Accounting policies

A summary of the principal accounting policies, all of which have been applied consistently throughout the year and the preceding year, is set out below.

2.1. Basis of preparation

The financial statements have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted in the European Union.

The financial statements have been prepared on the historical cost basis, except for the revaluation of certain financial instruments and property. Historical cost is generally based on the fair value of the consideration given in exchange for the assets. The principal accounting policies adopted are set out below.

2.2. Going concern

The Group's business activities are associated with providing high value-added energy services, innovative technology-led business solutions and new build power plant to the power generation industry and associated markets.

The energy industry is continuing to experience a period of rapid market evolution. This has led to 2017 being another challenging year for the Group, and this is reflected in the Group's results. Order intake for the Group reduced by 24% to £493,402,000 (2016: £651,874,000). Group revenues for the year were also impacted with a reduction to £623,830,000 (2016: £713,713,000).

Operating loss for the year was £12,158,000 (2016: £11,736,000 loss) due to legacy project costs, continuing pressure on volumes and competitive pricing pressures. The Group has implemented restructuring programmes to streamline the business into a more efficient platform to return to profitability. No restructuring costs were recognised in 2017 (2016: £14,572,000) but a programme of further savings in 2018 is underway with some associated extra cost expected.

These factors combined with exchange losses of £28,860,000 (2016: £42,754,000 gain) on the strengthening of the Pound against the US Dollar and net finance costs before exchange of £6,537,000 (2016: £9,288,000) resulted in a loss before tax of £65,953,000 (2016: £625,000 loss). An impairment loss of £12,348,000 (2016: £21,460,000) is included in this figure arising from a reduction in the expected future cash flows of the Doosan Lentjes business from its project pipeline.

Managing risk is seen as a key attribute of the Group, with a focus on quality in everything we do. The backbone of our business is our people who we make significant efforts to train and develop through our many accredited programmes to ensure that they are amongst the best in their respective fields.

The major uncertainties in terms of trading in the current market are the fluctuations in raw material and supplier costs, especially on key contracts. Reflecting this situation where a position is particularly volatile, the Group will seek to agree appropriate escalation formulae or cost plus agreements with customers to help mitigate this. The other significant trading uncertainty is the timing of major new build projects. Particularly in western markets we are currently seeing delays over when projects will be released due to investment and environmental issues. The Group addresses this by having a portfolio of large projects being bid at any time; additionally we are protected by the balance of our business with both service and projects workload.

In respect of foreign currencies, the Group's policy is to hedge all significant exposure to movements in exchange rates primarily through the use of the forward market. No trading or speculation in financial instruments is undertaken.

With regard to the recognition of the pension scheme position, the Group is exposed to the performance of the assets invested in equities and bonds as well as the impact on liabilities of movements in bond rates and other actuarial assumptions which can vary significantly over time. To tackle these risks the Group has taken a number of actions over the previous years including closing the defined benefit scheme to new entrants, future accruals, liability hedging and increasing contributions. There is an investment sub-committee jointly appointed by Doosan Babcock Limited and the Pension Trustees in addition to the financial advisers appointed by the Trustees who aim to optimise the performance of the scheme's assets.

In addition, note 15 to the financial statements include the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposures to credit risk and liquidity risk.

The Company provides key corporate services to its group and this is funded by charging for these services to its subsidiary undertakings. The continued operation of the Company is therefore driven by and contingent on, the same factors as the Group as a whole.

The Company does have significant loans due to two of its subsidiaries, but there is no intention of either of these subsidiaries, both of which are fully controlled by the Company and its board, to call in payment for these loans.

The Group's forecasts and projections, taking account of reasonably possible changes in trading performance, show that the Group will meet the scheduled repayments and will be able to operate within the limits of the banking covenants for a period of at least 12 months from the date of approval of these financial statements.

The Directors have a strong expectation based on the strong cash position, size of the current order book and the business projections that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. During the current year the company has suffered additional losses on certain large contracts which have made this a difficult year. They are not expected to recur in future years. An assessment of future performance has been made based on the five year plan and applying sensitivity analysis reducing turnover by up to 10%. This still shows a positive cash flow every year over the next 5 years. Thus the Directors continue to adopt the going concern basis of accounting in preparing the annual financial statements.

2.3. Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (its subsidiaries) made up to 31 December each year. Control is achieved when the Company:

- has the power over the investee;
- is exposed, or has rights, to variable return from its involvement with the investee;
- has the ability to use its power to affects its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

When the Company has less than a majority of the voting rights of an investee, it considers that it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements;
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings;
- and whether the Company can exercise control over an entity as a result of the Company lending the entity a significant amount of money.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company losses control of the subsidiary. Specifically, the results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the date the Company gains control until the date when the Company ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of the subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between the members of the Group are eliminated on consolidation.

Changes in the Group's ownership interests in existing subsidiaries

Changes in the Group's interests in subsidiaries that do not result in a loss of control are accounted for as equity transactions. The carrying amount of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognised directly in equity and attributed to the owners of the Company.

When the Group loses control of a subsidiary, the gain or loss on disposal recognised in profit or loss is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), less liabilities of the subsidiary and any non-controlling interests. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IAS 39 Financial Instruments: Recognition and Measurement, when applicable, the costs on initial recognition of an investment in an associate or a joint venture.

Non-controlling interests

Non-controlling interests in subsidiaries are identified separately from the Group's equity therein. Those interests of non-controlling shareholders that are present ownership interests entitling their holders to a proportionate share of net assets upon liquidation may initially be measured at fair value or at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. The choice of measurement is made on an acquisition-by-acquisition basis. Other non-controlling interests are initially measured at fair value. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

2.4. Business combinations

Acquisitions of subsidiaries and businesses are accounted for using the acquisition method. The consideration for each acquisition is measured at the aggregate of the fair values (at the date of exchange) of assets given, liabilities incurred or assumed, and equity instruments issued by the Group in exchange for control of the acquiree. Acquisition-related costs are recognised in profit or loss as incurred.

Where applicable, the consideration for the acquisition includes any asset or liability resulting from a contingent consideration arrangement, measured at its fair value at its acquisition date. Subsequent changes in such fair values are adjusted against the cost of acquisition where they qualify as measurement period adjustments (see below). All other subsequent changes in the fair value of contingent consideration classified as an asset or liability are accounted for in accordance with relevant IFRSs.

The acquiree's identifiable assets, liabilities and contingent liabilities that meet the conditions for recognition under IFRS3 are recognised at their fair value at the acquisition date, except that deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognised and measured in accordance with IAS 12 Income Taxes and IAS 19 Employee Benefits respectively.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see below), or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the amounts recognised as of that date.

The measurement period is the period from the date of acquisition to the date the Group obtains complete information about facts and circumstances that existed as at the acquisition date, and is subject to a maximum of one year.

2.5. Segmental reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker (CODM). The chief operating decision maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Chief Executive Officer who makes strategic decisions.

The significant business units used for segmental reporting can be seen in note 5 and consist of Babcock, Lentjes and Skoda. These are reported to the CODM via monthly management accounts as a profit and loss account. The statement of financial position is reported on a group basis and is not split out into any greater level of detail in those accounts.

2.6. Functional currency

The majority of the Company's operations are in the UK and the majority of its expenses and income are in Pound Sterling, so the Directors assessed the functional currency of the Company to be Pound Sterling in accordance with IAS 21.

2.7. Presentation currency

The majority of the Company and the Group operations are in the UK and the majority of its expenses and income are in Pound Sterling, so the Directors continue to elect the presentation currency of the Group and Company to be Pound Sterling**.**

2.8. Goodwill

Goodwill arising in a business combination is recognised as an asset at the date that control is acquired (the acquisition date). Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the acquirer's previously held equity interest (if any) in the entity over the net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed.

Goodwill is not amortised but is reviewed for impairment at least annually. For the purpose of the impairment review, goodwill is allocated to each of the Group's cash-generating units expected to benefit from the synergies of the combination. Cash-generating units to which goodwill has been allocated are tested for impairment annually at the year-end, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

2.9. Intangible assets

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from the Group's product development is recognised only if all of the following conditions are met:

- an asset is created that can be identified (such as technology which can be used in a product);
- the completion of such intangible asset is technically feasible and the asset will be available for use or sale;
- the entity has the intention and ability to complete the intangible asset and use or sell it;
- it is probable that the asset created will generate future economic benefits; and
- the development cost of the asset can be measured reliably.

Internally-generated intangible assets are amortised on a straight-line basis over their useful lives. Where no internally-generated intangible asset can be recognised, development expenditure is recognised as an expense in the period in which it is incurred.

Software is treated as an intangible asset.

Intangible assets are stated at cost less accumulated amortisation and accumulated impairment losses.

The expected amortisation rates are:

Goodwill	nil (note 2.8)
Development costs	20% to 50%
Software	16% to 33⅓%
Patents	Lifetime of the patent

Amortisation of intangible assets is charged to operating profit in the income statement.

2.10. Subsidiaries, associates, partnership and investments (Company only)

Investments are stated at cost less any provisions for impairment. Investments are reviewed at each balance sheet date to determine whether there is an indication of impairment. If any such indication exists, the asset's recoverable amount is estimated.

An impairment loss is recognised whenever the carrying amount of an asset or its cash generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

On disposal of investments, the difference between disposal proceeds and the carrying amount of investment are recognised in the income statement.

2.11. Property, plant and equipment

Freehold buildings, plant, machinery and equipment are stated at cost less accumulated depreciation and impairment losses.

Properties in the course of construction for production, supply or administrative purposes, or for purposes not yet determined, are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

The gain or loss arising on the disposal or scrap of an asset is determined as the difference between the sale proceeds and the carrying amount of the asset and is recognised in the income statement.

The Group chooses to perform a regular independent review every 2 years of the value of land assets in order to assess whether a revaluation is required. This ensures that the carrying amount of these assets does not differ materially from their fair value. The last valuation was performed in November 2017 by an independent valuer JLL. For the property at Birmingham New Road in Tipton this resulted in an increase in value of £940,000 in the accounts for the year ended 31 December 2017. Had the revaluation not been performed the carrying value of the land would have been £14,087,000. If the assets been accounted for using the cost model the carrying value of the land would have been £10,106,000.

Depreciation is charged on cost on a straight-line basis at rates appropriate to the expected useful lives of the assets concerned. Freehold land and assets in the course of construction are not depreciated.

The expected depreciation rates are:

Land and buildings	
Freehold and leasehold buildings	2% to 12½%
Land	Nil
Plant and equipment	
Heavy production	3% to 10%
Other plant and machinery	3% to 33⅓%
Motor vehicles	12.5% to 25%
Office equipment and furniture	8% to 33⅓%
Computers	20% to 33⅓%

2.12. Government grants

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attached to them and that the grants will be received.

Capital-based government grants are credited to the assets to which they relate, with the net amount then being released to the income statement as depreciation.

Grants and funding of a revenue nature are netted against the expenses to which they relate. Recognition of the funding income is realised at the same rate as expenditure with any advance receipts of such funding being kept as deferred income. If the development to which this relates meets the criteria for capitalisation then the net cost is capitalised.

2.13. Inventory

Inventories are stated at the lower of cost and net realisable value. An inventory provision is booked to state inventory at net realisable value where the realisable value from sale of the inventory is estimated to be lower than the inventory carrying value.

Costs comprise direct materials, and in the case of work-in-progress, direct labour and overheads, including depreciation, but excludes selling and administration costs.

Raw materials and consumables are stated using the weighted average cost method.

2.14. Leasing and hire purchase commitments

Hire charges paid under operating leases are charged to the income statement on a straight-line basis over the term of the lease.

2.15. Provisions

A provision is recognised in the statement of financial position if, as a result of a past event, there is a present legal or constructive obligation that can be measured reliably and it is probable that an outflow of economic benefits will be required to settle the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. Where 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.

Provisions for the expected cost of warranty obligations under local sale of goods legislation are recognised at the date of sale of the relevant products, at the Directors' best estimate of the expenditure required to settle the Group's obligation.

Present obligations arising under onerous contracts are recognised and measured as provisions. An onerous contract is considered to exist where the Group has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from it.

2.16. Dividend

Dividends payable are recognised as a liability when declaration of the dividend is approved in the shareholders' meeting.

2.17. Issued capital

Common stocks are classified as equity, and the incremental costs directly arising from capital transactions, net of tax are deducted from equity.

2.18. Equity instruments

Financial instruments are classified as equity only if they are not redeemable, or redeemable solely upon the Group's decision, or the Group has no obligation to deliver cash or another financial asset. Incremental costs directly arising from capital transactions, net of tax are deducted from equity. When distributions relating to these instruments are approved at a general meeting of shareholders, the Group recognises a dividend liability accordingly.

2.19. Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provided in the normal course of business, net of discounts, Value Added Tax ('VAT') and other sales-related taxes.

2.19.a. Construction contracts

Where the outcome of a construction contract can be estimated reliably, revenue and costs are recognised by reference to the stage of completion of the contract activity at the reporting date. This is normally measured by the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs, except where this would not be representative of the stage of completion. Variations in contract work and incentive payments are included to the extent that the amount can be measured reliably and its receipt is considered probable. Claims for extensions of time are recognised only to the extent that they are in advanced stages of negotiation, are not subject to on-going formal dispute procedures and their receipt is considered probable

Where the outcome of a construction contract cannot be estimated reliably, contract revenue is recognised to the extent of contract costs incurred where it is probable they will be recoverable. Contract costs are recognised as expenses in the period in which they are incurred.

When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised in the income statement immediately.

Where the amounts recognised in revenue exceed the amounts invoiced to the customer, the balance is included within 'amounts due from contract customers in respect to project work' within the statement of financial position.

Where the amounts recognised in revenue are less than the amounts invoiced to the customer, the balance is included within 'amounts due to contract customers in respect to project work' within the statement of financial position.

2.19.b. Sales (other than project sales) of goods and services at invoiced value

The revenue is recognised at the point at which the Group has transferred to the buyer the significant risks and rewards of ownership of the goods and services.

2.19.c. Fees for technical aid and other services rendered

Fees for technical aid provided to third parties and the Parent company are recognised at the point at which the knowledge is transferred to the recipient. In the case of aid provided to the Parent company, this happens at the point at which the contract to which the aid relates is awarded to the Parent company. At this point any further support provided by the Group to the Parent is minimal and therefore revenue is recognised on the basis that the Group has substantially performed its obligated service to the Parent company. In the case of third parties, continuing support usually needs to be provided and so the revenue is instead recognised over the life of the project for which the aid has been provided.

2.20. Taxation

The tax charge comprises current tax and deferred tax, calculated using tax rates that have been enacted or substantively enacted by the reporting date. Current tax and deferred tax are charged or credited to the income statement, except when they relate to items charged or credited directly to equity, in which case the relevant tax is also reflected in equity. Current tax is based on the result for the year.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for, the initial recognition of goodwill, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit other than a business combination and differences relating to investments in subsidiaries to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the temporary difference can be utilised.

2.21. Pension costs

Defined benefit scheme

The Group operates pension schemes providing benefits based on final pensionable pay. The assets of the UK scheme are held separately from those of the Group. Contributions are based on periodic actuarial calculations and are charged so as to spread the cost of the pensions over the expected service lives of the employees who are members of the scheme. The 'Doosan Power Systems Limited' scheme in the UK was closed to new members on 31 March 2001. The 'Doosan Lentjes GmbH' scheme in Germany was closed to new members on 31 October 2011. In April 2014 the UK defined benefit scheme was closed to future accrual.

Pension scheme assets are measured using fair value. Pension scheme liabilities are measured using a projected unit method and discounted at the current rate of return on a high quality corporate bond of equivalent term and currency to the liability.

Actuarial gains and losses are recognised in full in the period in which they occur. They are recognised outside of the income statement and presented in other comprehensive income.

Past service cost is recognised when any plan amendment or curtailment occurs to the extent that the benefits are already vested or is otherwise amortised on a straight-line basis over the average period until the benefits become vested.

The retirement benefit obligation recognised in the statement of financial position represents the present value of the defined benefit obligation as adjusted for unrecognised past service cost and as reduced by the fair value of scheme assets. Any asset resulting from this calculation is limited to past service cost, plus the present value of available refunds and reductions in future contributions to the scheme.

The cost of the Group's defined benefit plans is determined in accordance with IAS 19 (revised): "Employee benefits" with the advice of independent professionally qualified actuaries on the basis of formal actuarial valuations using the projected unit credit method. In line with normal practice, these valuations are undertaken triennially in the UK and annually in Germany.

Defined contribution scheme

The Group also operates defined contribution pension schemes. The assets of the scheme are held separately from those of the Group in an independently administered fund. The amounts charged against profit represent the contributions payable to the scheme in respect of the accounting period.

2.22. Group operating profit

Group operating loss is stated after charging restructuring costs but before the share of results of associates, impairments, gains / (loss) on the disposal of investments, property, plant and equipment and finance costs.

2.23. Financial instruments

2.23.a. Derivatives

The Group uses derivative financial instruments to manage interest rate risk and hedge exposures to fluctuations in foreign currencies in accordance with its risk management policies. Commodity risk is managed through escalation clauses in customer contracts. A description of the Group's objectives, policies and strategies with regard to derivatives and other financial instruments is set out in note 15.

Derivatives are initially recognised in the statement of financial position at fair value on the date the derivative transaction is entered into and are subsequently remeasured at fair value.

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognised in the income statement together with any changes in the fair value of the hedged item that is attributable to the hedged risk.

Changes in the fair value of the effective portion of derivatives that are designated and qualify as cash flow hedges are recognised in equity. Changes in fair value of the ineffective portion of cash flow hedges are recognised in the income statement. Amounts accumulated in equity are transferred to the income statement when the underlying transaction occurs or, if the transaction results in a non-financial asset or liability, are included in the initial cost of the asset or liability.

Changes in the fair value of the effective portion of derivatives that are designated and qualify as hedges of net investment in foreign operations are recognised in equity. Changes in the fair value of the ineffective portion of net investment hedges are recognised in the income statement. Amounts accumulated in equity are transferred to the income statement upon disposal of the foreign operation. Changes in the fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in the income statement as they arise.

Hedge accounting discontinues when the hedging instrument expires or is sold, terminates, exercised or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument in equity is retained in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is transferred to the income statement for the period.

Hedge accounting is only applied by certain subsidiaries of the group.

2.23.b. Financial assets

All financial assets are recognised and derecognised on a trade date where the purchase or sale of a financial asset is under a contract whose terms require delivery of the financial asset within the timeframe established by the market concerned, and are initially measured at fair value, plus transaction costs, except for those financial assets classified as at fair value through profit or loss, which are initially measured at fair value.

Financial assets are classified into the following specified categories, financial assets, 'available-for-sale' (AFS) financial assets, cash and cash equivalents or 'loans and receivables'. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Available-for-sale ('AFS') financial assets

Listed shares and listed redeemable notes held by the Group that are traded in an active market are classified as being AFS and are stated at fair value. Fair value is determined in the manner described in note 2.24. Gains and losses arising from changes in fair value are recognised in other comprehensive income and accumulated in the investment's revaluation reserve with the exception of impairment losses, interest calculated using the effective interest method and foreign exchange gains and losses on monetary assets, which are recognised directly in profit or loss. Where the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously recognised in the investments revaluation reserve is reclassified to profit or loss.

The Group also has investments in unlisted shares that are not traded in an active market but that are classified as AFS financial assets and are stated at the cost less impairment.

Dividends on AFS equity instruments are recognised in profit or loss when the Group's right to receive the dividends is established.

The fair value of AFS monetary assets denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the reporting date. The foreign exchange gains and losses that are recognised in profit or loss are determined based on the amortised cost of the monetary asset. Other foreign exchange gains and losses are recognised in other comprehensive income.

Liquid resources and cash

Liquid resources comprise short-term treasury deposits which have maturity dates of up to one year, government securities and money market funds. Cash and cash equivalents comprises cash in hand and overnight deposits less, for the purpose of the cash flow statement only, overdrafts.

Loans and receivables

Trade receivables, loans and other receivables are non-derivative financial assets that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest method, less any impairment. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. Interest income is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial.

The effective interest rate amortisation is included in finance income in the income statement. The losses arising from impairment are recognised in the income statement in finance costs. Loans will be tested for impairment at each period end to determine if any impairment exists.

Derecognition of financial assets

The Group derecognises 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 recognises 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 recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

2.23.c. Financial liabilities

Financial Liabilities within the scope of IAS 39 are classified as loans and borrowings, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. The Group determines the classification of its financial liabilities at initial recognition.

All Financial liabilities are recognised initially at fair value and in the case of borrowings and bonds, carried at amortised cost. This includes directly attributable transaction costs.

The Groups financial liabilities include trade and other payables, borrowings, derivative financial instruments and bonds.

Borrowings

Interest-bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are charged to the income statement on an accruals basis using the effective interest method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Trade and other payables

Trade payables are not interest bearing and are stated at their fair value. Amounts due to customers for project work relate to advances received from customers on project which are in progress.

2.23.d. Foreign currencies

The individual financial statements of each group company are presented in its functional currency, being the currency of the primary economic environment in which it operates, which is the Pound Sterling for the most significant subsidiary, Doosan Babcock Limited. For the purpose of the consolidated financial statements, the results and financial position of each group company are expressed in Pound Sterling.

In preparing the financial statements of the individual companies within the Group, transactions in currencies other than the entity's functional currency (foreign currencies) are recognised at the rate of exchange prevailing on the date of the transaction. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rate prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rate 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 recognised in the income statement 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 to hedge certain foreign currency risks (see note 2.23.a above under financial instruments/hedge accounting); 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 recognised 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 translated at the exchange rate prevailing on the reporting date. Income and expense items are translated at the average exchange rate for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rate at the date of the transaction is used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in equity (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation (disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, loss of joint control over a jointly controlled entity that includes a foreign operation, or loss of significant influence over an associate that includes a foreign operation), all of the accumulated exchange differences in respect of that operation attributable to the Group are reclassified to the income statement.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the exchange rate prevailing at the reporting date.

2.24. Fair value estimation

The fair value at initial cost of financial instruments traded in active markets (such as publicly traded derivatives or trading and available-for-sale securities) is based on quoted market prices at the reporting date. The quoted market price used for traded financial assets held by the Group is the current bid price. The appropriate quoted market price for traded financial liabilities is the current offer price. The fair value of forward foreign exchange contracts is determined by measuring the difference between the exchange rate at the reporting date and the forward exchange rate per the contract. The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. Investments are held at cost less any provision for impairment.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses a variety of methods which include the use of recent arm's-length transactions, reference to other instruments that are substantially the same, discounted cash flow analysis and option pricing models which reflect the specific instrument.

Where market values are not available, fair values are based on valuation methodologies which require inputs and forecasts to be made. Judgement is required in determining the appropriate assumptions underlying those inputs and forecasts.

The nominal value of receivables (less estimated impairments) and payables are assumed to approximate their fair values. The fair value of financial liabilities measured at amortised cost is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments. Discounted cash flows are used to determine the fair value for the majority of remaining financial instruments.

2.25. Adoption of new and revised standards

The Group has adopted amendments issued by the International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRIC) of the IASB that are relevant to its operations and effective for accounting periods beginning on or after 1 January 2017. These were:

- Amendments to IAS 7 Statement of Cash Flows: Disclosure Initiative
- Amendments to IAS 12 Income Taxes: Recognition of Deferred Tax Assets for Unrealised Losses

These amendments did not have a material impact on the Group's financial performance or position.

2.25a New and revised IFRSs in issue but not yet effective

At the date of authorisation of these financial statements, the Group has not applied the following new and revised IFRSs that have been issued but are not yet effective (and in some cases had not yet been adopted in the EU):

- IFRS 9 Financial Instruments – effective for accounting periods beginning on or after 1 January 2018
- IFRS 15 Revenue from Contracts with Customer – effective date deferred to accounting periods beginning on or after 1 January 2018
- IFRS 16 Leases – effective for accounting periods beginning on or after 1 January 2019
- IFRIC 22 – Foreign Currency Transactions and Advance Consideration – New Interpretation—effective date deferred to accounting periods beginning on or after 1 January 2018
- Clarification to IFRS15 'Revenue from contracts with customers' – effective on or after 1 January 2018
- Annual Improvements to IFRSs: 2014 – 2016 Cycle – effective for accounting periods 1 January 2018

The directors of the Company do not anticipate that the adoption of the Standards listed above will have a material impact on the financial statements of the Group in future periods, with the exception of those discussed below.

2.25b IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a five-step model to account for revenue arising from contracts with customers. Under IFRS 15, revenue is recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The Group commenced a detailed analysis in 2017 to assess the impact of IFRS 15. Although our work is still ongoing, our initial assessment is that the group does not expect the transition adjustment impact at 1 January 2018 to be material.

The Group plans to adopt the new standard on 1 January 2018 using the modified retrospective method.

Construction contracts

Currently, where the outcome of a construction contract can be estimated reliably, revenue and costs are recognised by reference to the stage of completion of the contract activity at the reporting date. This is normally measured by the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs, except where this would not be representative of the stage of completion. Variations in contract work and incentive payments are included to the extent that the amount can be measured reliably and its receipt is considered probable. Claims for extensions of time are recognised only to the extent that they are in advanced stages of negotiation, are not subject to on-going formal dispute procedures and their receipt is considered probable. Where the outcome of a construction contract cannot be estimated reliably, contract revenue is recognised to the extent of contract costs incurred where it is probable they will be recoverable. Contract costs are recognised as expenses in the period in which they are incurred. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised in the income statement immediately. Where the amounts recognised in revenue exceed the amounts invoiced to the customer, the balance is included within 'amounts due from contract customers in respect to project work' within the statement of financial position. Where the amounts recognised in revenue are less than the amounts invoiced to the customer, the balance is included within ‘amounts due to contract customers in respect to project work’ within the statement of financial position.

For its construction contracts, the Group has reached the following main conclusions when applying IFRS 15 to its current project portfolio at 1 January 2018:

- Construction contracts contain distinct goods and services but these are not distinct in the context of the contract. It is therefore appropriate to combine the services into a single performance obligation which is consistent with the current accounting treatment
- Services are satisfied over time given that the customer simultaneously receives and consumes the benefits provided by the Group. Consequently, under IFRS 15 the Group will continue to recognise revenue from its construction contracts over time rather than at a point of time
- Contract modifications, e.g. variations, will be accounted for as part of the existing contract or a new contract depending on the details of the contract. For material contract modifications, based on management’s assessment, a separate contract may be recognised in line with current practice
- Variable consideration, e.g. variation orders, claims and liquidated damages, will be assessed at contract inception and re-assessed at each reporting period using the most likely amount method. The requirement to estimate variable consideration at contract inception is new, and its application will not result in any significant impact to opening retained earnings at 1 January 2018. This new requirement could however alter the amount and timing of revenue and margin recognition in future reporting periods depending upon the facts and circumstances of individual contracts
- Contract costs are currently recognised in the consolidated income statement as an input to percentage-of-completion. Management will estimate cost accruals to arrive at the total contract costs to be recognised in the consolidated income statement. Estimating these cost accruals may result in a greater degree of margin variability between reporting periods
- The advance payments for construction contracts are structured primarily for reasons other than the provision of finance to the Group, and they do not provide customers with an alternative to pay in arrears. In addition, the length of time between when the customer pays and the Group transfers goods and services to the customer is relatively short. Therefore, the Group has concluded that there is not a significant financing component within such contracts. Currently, the Group does not have any contracts where payments by customer are over a number of years after the Group has transferred goods and services to the customer; if such cases arise in future the transaction price for such contracts will be determined by discounting the amount of promised consideration using an appropriate discount rate
- Having reviewed the contract portfolio we are satisfied that in the substantial majority of contracts the Group is principle rather than agent. Based on our accounting assessment any adjustments which could arise from this are not expected to be material.
- Pre-contract/bid costs are currently recognised as an expense until there is a high probability that the contract will be awarded. The Group currently capitalises pre-contract/bid costs, where such costs are incremental to the contract and are expected to be recovered, as an asset and will expense it over the life of the contract. This is in line with the requirements of IFRS 15 therefore no material change is expected
- IFRS 15 requires contract assets and contract liabilities for individual customers to be presented on a net basis. This will impact the presentation of these contract assets and contract liabilities in the consolidated statement of financial position

Sales (other than project sales) of goods and services at invoiced value:

The revenue is recognised at the point at which the Group has transferred control to the buyer. This is in line with IFRS15 requirements and as such no adjustment is required for this revenue.

Fees for technical aid and other services rendered:

Fees for technical aid provided to third parties and the Parent company are recognised at the point at which the knowledge is transferred to the recipient. In the case of aid provided to the Parent company, this happens at the point at which the contract to which the aid relates is awarded to the Parent company. At this point any further support provided by the Group to the Parent is minimal and therefore revenue is recognised on the basis that the Group has substantially performed its obligated service to the Parent company. In the case of third parties, continuing support usually needs to be provided and so the revenue is instead recognised over the life of the project for which the aid has been provided. . This is in line with IFRS15 requirements and as such no adjustment is required for this revenue.

2.25c IFRS 16 Leases

IFRS 16 was issued in January 2016 and it replaces IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under IAS 17. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g. personal computers) and short-term leases (e.g. leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognise a liability to make lease payments (i.e. the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e. the right-of-use asset). Lessees will be required to separately recognise the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g. a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognise the amount of the re-measurement of the lease liability as an adjustment to the right-of-use asset.

Lessor accounting under IFRS 16 is substantially unchanged from today's accounting under IAS 17. Lessors will continue to classify all leases using the same classification principle as in IAS 17 and distinguish between two types of leases: operating and finance leases.

IFRS 16 also requires lessees and lessors to make more extensive disclosures than under IAS 17.

IFRS 16 is effective for annual periods beginning on or after 1 January 2019. Early application is permitted, but not before an entity applies IFRS 15. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs.

In 2018, the Group will assess the potential effect of IFRS 16 on its consolidated financial statements and intends to adopt the standard at the required effective date.

2.25d IFRS 9 Financial Instruments

In July 2014, the IASB issued the final version of IFRS 9 *Financial Instruments* that replaces IAS 39 *Financial Instruments: Recognition and Measurement* and all previous versions of IFRS 9. IFRS 9 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. IFRS 9 is effective for annual periods beginning on or after 1 January 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

The Group plans to adopt the new standard on the required effective date and will not restate comparative information. During 2017, the Group has performed a detailed impact assessment of all three aspects of IFRS 9.

This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information being made available to the Group in 2018 when the Group will adopt IFRS 9. Overall, the Group expects no significant impact on its statement of financial position and equity except for the effect of applying the impairment requirements of IFRS 9. The Group expects an increase in the loss allowance resulting in a negative impact on equity as discussed below. In addition, the Group will implement changes in classification of certain financial instruments.

(a) Classification and measurement

The Group does not expect a significant impact on its consolidated statement of financial position on applying the classification and measurement requirements of IFRS 9. It expects to continue measuring at fair value all financial assets currently held at fair value.

(b) Impairment

IFRS 9 requires the Group to record expected credit losses on all of its debt securities, loans and trade receivables, either on a 12-month or lifetime basis. The Group will apply the simplified approach and record lifetime expected losses on all trade receivables. The Group will apply the simplified approach and record lifetime expected losses on all loans and receivables, trade receivables, retention receivables, amounts due from customers and bank balances. The Group has determined that, due to a change in the loss allowance recognition from an incurred loss model to an expected credit loss model and the impairment requirements under IFRS 9 being applied for the first time to its retention receivables and amounts due from customers, the initial application of the standard will not have a material impact on the opening retained earnings at 1 January 2018.

(c) Hedge accounting

The Group determined that all existing hedge relationships that are currently designated in effective hedging relationships will continue to qualify for hedge accounting under IFRS 9. The Group has chosen not to retrospectively apply IFRS 9 on transition to the hedges where the Group excluded the forward points from the hedge designation under IAS 39. As IFRS 9 does not change the general principles of how an entity accounts for effective hedges, applying the hedging requirements of IFRS 9 will not have a significant impact on Group’s financial statements.

The new standard also introduces expanded disclosure requirements and changes in presentation. These are expected to change the nature and extent of the Group’s disclosures about its financial instruments particularly in the year of the adoption of the new standard. Although our work is still ongoing, our initial assessment is that the group does not expect the transition adjustment impact at 1 January 2018 to be material.

3. Key sources of estimation of uncertainty

In the application of the Group’s accounting policies, which are described in note 2, the Directors are required to make judgements, 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 on-going basis. Revisions to accounting estimates are recognised 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.

3.1. Long term contracts

The major uncertainty relating to ongoing contracts is the difficulty in assessing the stage of completion of contracts recognised on a long term contract accounting basis.

The group seek to mitigate this uncertainty by regularly assessing the forecasted position on a contract by contract basis to confirm that they still reflect a best estimate of expected costs to complete.

3.2. Impairment of goodwill

Determining whether goodwill is impaired requires an estimation of the value-in-use of the cash-generating units to which the goodwill has been allocated. The value in use calculation requires an estimate to be made of the timing and amount of future cash flows expected to arise from the cash-generating unit and the application of a suitable discount rate in order to calculate the value in use. The carrying value of goodwill at 31 December 2017 was £386,964,000 (2016: £374,550,000), this reflects an impairment in the year of £12,348,000 (2016 £21,460,000) which was offset by a translation gain of £24,762,000 (2016 £42,914,000 gain)

4. Critical judgements in applying the Group's accounting policies

The following are the critical judgements that the Directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

4.1. Revenue and margin recognition

The Group's revenue recognition and margin recognition policies, which are set out in note 2.19 are central to how the Group values the work it has carried out in the financial year. In the main revenue is recognised directly in proportion to the costs incurred on the projects, but there are times when forecasts need to be made of the outcomes of long-term construction services which require assessments and judgements to be made on recovery of pre-contract costs, changes in work scopes, contract programmes, maintenance liabilities, potential liquidated damages and changes in costs including costs to complete.

4.2. Perpetual bonds

On 3 December 2015 the Company issued bonds which are listed on the Singapore exchange, details of which can be found in note 24. The net proceeds of the issue were £192,082,000. After reviewing the terms of the bond the Company has taken the decision to account for the bond as an equity instrument. This is because the bonds include no contractual obligation to deliver cash or another financial asset to another entity; or to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the Company.

4.3. Taxation

The Group is subject to tax in a number of jurisdictions and judgement is sometimes required in determining the worldwide provision for income taxes.

The Group provides for liabilities in respect of uncertain tax positions where additional tax may become payable in future periods and such provisions are based on management's assessment of exposures. The Group also recognises assets where a reduction in future tax or a future receipt of tax may crystallise, when it is deemed prudent to recognise such an asset based on management's assessment of such events. A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the temporary difference can be utilised.

4.4. Defined Benefit Plans (Pension Benefits)

The cost of the defined benefit pension plan and other post-employment medical benefits and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexities involved in the valuation and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

Further details about pension obligations are provided in note 9.

5. Segmental reporting

Management has determined the operating segments based on information reviewed by the Chief Executive Officer to assess performance and allocate resources. Management has identified that the Chief Executive Officer is the chief operating decision maker in accordance with the requirements of IFRS 8 'Operating Segments'.

The principal activities of all segments are associated with providing high value-added energy services, innovative technology-led business solutions and new build power plant to the power generation industry and associated market.

2017	Doosan Babcock Group excluding Lentjes	Skoda	Lentjes	Other	Total
	£000	£000	£000	£000	£000
Revenue					
Total revenue	419,135	182,805	20,331	1,559	623,830
Total revenue from external customers	419,135	182,805	20,331	1,559	623,830
Depreciation	(3,248)	(6,572)	(252)	(320)	(10,392)
Amortisation	(3,407)	(3,412)	(2,500)	(225)	(9,544)
Operating (loss)/profit	(15,464)	16,950	(11,479)	(2,165)	(12,158)
Other non-operating expenses	(5,091)	(67)	(1,048)	(225)	(6,431)
Impairment of investments	—	—	—	—	—
Impairment of Goodwill	—	—	(12,349)	—	(12,349)
Profit on disposal of property, plant and equipment	409	(27)	—	—	382
Finance income					3,227
Finance costs					(38,624)
Loss before taxation					(65,953)

2016	Doosan Babcock Group excluding Lentjes	Skoda	Lentjes	Other	Total
	£000	£000	£000	£000	£000
Revenue					
Total revenue	451,891	240,760	21,062	—	713,713
Total revenue from external customers	451,891	240,760	21,062	—	713,713
Depreciation	(3,807)	(6,101)	(234)	(321)	(10,463)
Amortisation	(6,300)	(2,097)	(1,263)	(56)	(9,716)
Operating (loss)/profit	(40,691)	49,442	(17,530)	(2,957)	(11,736)
Other non-operating expenses	(360)	(104)	3	—	(461)
Impairment of investments	(462)	—	—	—	(462)
Impairment of Goodwill	—	—	(21,460)	—	(21,460)
Profit on disposal of property, plant and equipment	13	14	—	—	27
Finance income					47,415
Finance costs					(13,948)
Loss before taxation					(625)

6. Revenue

	2017	2016
	£000	£000
Revenue from construction contracts and related services	623,830	713,713

Turnover shown by origin of the entity which has generated it	2017	2016
	£000	£000
United Kingdom	362,044	398,381
Czech Republic	182,805	240,760
Germany	33,862	35,030
Middle East	19,869	19,762
Poland	24,339	18,523
North America	911	1,257
	623,830	713,713

No customer accounts for more than 10% of total revenue of the group.

7. Non-Current Assets

Non-Current assets by geographic location	2017	2016
	£000	£000
United Kingdom	116,460	125,728
Czech Republic	352,428	325,073
Germany	35,113	48,408
Middle East	2,080	2,001
Poland	4,818	4,508
North America	—	—
	510,899	505,718

Non-Current assets consists of all Property Plant and Equipment and Intangible Assets, including Goodwill based on the location of the asset of the location of the company to which the Goodwill relates.

8. Group loss

8.1. Group loss is stated after charging / (crediting)

	2017	2016
	£000	£000
Property, plant and equipment:		
Depreciation of owned assets	10,392	10,463
Intangible assets:		
Amortisation of Capitalised development expenditure	4,279	4,366
Amortisation of software	5,213	4,163
Amortisation of patents	52	1,187
Rentals under operating leases:		
Land and buildings	6,074	6,009
Hire of plant and machinery	2,570	3,377
Research and development:		
Revenue expenditure	15,851	16,074
Recharges to the Parent Company	(10,428)	(10,803)
Contractual allocation to Pension Scheme	(810)	(810)
Restructuring costs	—	14,572
Exchange (gains)/losses	28,860	(42,754)

8.2. Auditor's remuneration

In 2017 Ernst & Young S.A. took up the position of Group Auditors following the resignation of Deloitte Audit S.à r.l (See Directors Report).

The fees paid to various network affiliates of the Company's auditor are split as follows:	2017	2016
	£000	£000
Audit of these financial statements	230	355
Audit of Company's subsidiaries, pursuant to legislation	60	223
Total Audit Fees	290	578
Services relating to taxation	—	580
Other	—	10
Total non-audit fees*	—	590

* No non-audit fees were incurred with Ernst & Young S.A. in 2017 as Deloitte continue to provide the group with the same taxation services provided in 2016.

9. Employees and Directors

9.1. Employee numbers and staff costs

	2017	2016	2017	2016
Average monthly number of persons employed during the year (including directors employed within the Group):	Company	Company	Group	Group
Production	—	—	4,873	5,404
Sales and administration	15	18	717	828
Research and development	—	—	178	203
	15	18	5,768	6,435

The average monthly number of persons employed reflects staff levels of the Company and subsidiary undertakings during the year.

	2017	2016
	£000	£000
Staff costs during the year (including directors employed within the Group):		
Wages and salaries	211,082	231,993
Social security costs	28,353	30,932
Other pension costs	4,402	6,438
	243,837	269,363

9.2. Remuneration of key management

	2017	2016
	£000	£000
Directors' emoluments:		
Current pay and benefits	524	697
Post-employment benefits	14	17
Social security costs	8	13
	546	727

The aggregate emoluments of the highest paid Director were £179,695 (2016: £469,349).

Since the Directors of the Company are also the key management personnel of the Group no additional information is required to be disclosed by IAS 24 in addition to the information already disclosed above.

9.3. Post-retirement benefits—Group—Doosan Babcock Limited (UK)

The Group operates two defined contribution schemes, a Company Personal Pension Plan and a Stakeholder Plan. The charge for the year in respect of these schemes was £3,584,000 (2016: £4,715,000).

The Group operates a defined benefit pension scheme (the 'scheme'), providing benefits based on final pensionable pay. The Scheme was closed to future benefit accrual with effect from 1 April 2014, with active members becoming deferred with a preserved pension in the Scheme based on their Pensionable Service and Final Pensionable Salary as at this date.

The assets of the scheme are invested by an independent trustee.

The scheme is an HMRC registered pension scheme and is subject to standard UK pensions and tax law. This means that the payment of contributions and benefits are subject to the appropriate tax treatments and restrictions and the scheme is subject to the scheme funding requirements outlined in section 224 of the Pensions Act 2004.

In accordance with UK trust and pensions law, the scheme has appointed trustees who are independent of the Group. Although the Group bears the financial cost of the scheme, the responsibility for the management and governance of the scheme lies with the trustees, who have a duty to act in the best interest of members at all time.

The main risks to which the Group is exposed in relation to the funded pension scheme are:

- Mortality risk—the assumptions adopted by the Group make allowance for the future improvements in life expectancy. However, if life expectancy improves at a faster rate than assumed, this would result in higher payments from the scheme and consequently increases the scheme's liabilities. The Group and the scheme's trustees review the mortality assumption on a regular basis to minimise the risk of using an inappropriate mortality assumption.

- Investment risk—the scheme invests its assets in a portfolio of asset classes including diversified growth funds, corporate bonds and government bonds. The investments consist mainly of quoted managed funds. There is the possibility that the returns generated by the portfolio of assets fall below the assumed rates of return.
- Yield risk—a fall in bond yields will increase both the scheme's liabilities, and to a lesser extent, the scheme's assets. As the scheme's liabilities (on the funding basis used to calculate the Group's contributions to the scheme) are greater than its assets until the deficit is made good, during that time the liabilities may grow by more in monetary terms, thus increasing the deficit in the scheme.
- Inflation risk—Benefits in the scheme accrued increase in line with inflation (subject to the relevant caps and floors), and so if inflation is greater than expected, the liabilities will increase.

The results of the actuarial valuation of the scheme at 1 April 2016 have been updated to 31 December 2017 by a qualified actuary, using a set of assumptions consistent with those required under IAS 19 (revised). The effect of the scheme's investment policy is not fully reflected in the accounting figures as the assumptions used for the purpose of the valuation under IAS 19 (revised) are different from those used for the funding valuation. The major assumptions used by the actuary were:

	2017	2016
Financial assumptions:		
Discount rate	2.50%	2.70%
Rate of increase in pensionable salaries	N/A	N/A
Rate of increase in pensions in payment (post-May 2002 service)	3.15%	3.05%
Rate of increase in pensions in payment (pre-May 2002 service)	3.45%	3.70%
Inflation assumption (and increases to pension in deferment)	3.20%	3.20%
Demographic assumptions:		
Pre-retirement mortality (male/female)	99%/109% S1NA/S1NFA, CMI 2016 +1.25% MI	99%/109% S1NA/S1NFA, CMI 2015 +1.25% MI
Post-retirement mortality for non-pensioner members (male/female)	99%/109% S1NA/S1NFA, CMI 2016 +1.25% MI	99%/109% S1NA/S1NFA, CMI 2015 +1.25% MI
Post-retirement mortality for pensioner members (male/female)	99%/109% S1NA/S1NFA, CMI 2016 +1.25% MI	99%/109% S1NA/S1NFA, CMI 2015 +1.25% MI

The rates used have been chosen from a range of possible amounts determined using actuarial assumptions that due to the timescale covered may not necessarily be borne out in practice.

The assets in the scheme were:

	2017 %	2017 £000	2016 %	2016 £000
Diversified growth fund				
SGMF Dynamic Fund	10.4	41,189	—	—
SGIF Global Select Equity Fund	19.1	75,915	—	—
Barings	—	—	12.0	47,501
Insight BOF	—	—	11.2	44,215
Pyrford	—	—	11.5	45,237
Baillie Gifford	—	—	12.2	48,249
Bonds				
SEI UK Property Fund	5.3	21,123	—	—
SGMF Liquid Hedged Fund	6.7	26,832	—	—
Return Fixed Income	25.9	103,104	—	—
Risk Management Fixed Income	32.1	127,457	—	—
RLAM	—	—	12.7	50,179
Babson Capital	—	—	12.4	49,125
Insight LDI	—	—	16.0	63,349
Insight LIBOR	—	—	3.4	13,223
Insight Liquidity Plus	—	—	0.4	1,507
Cash				
Trustee bank account	0.5	2,052	8.2	32,550
Total market value of assets		397,672		395,135
Present value of liabilities		(492,457)		(510,963)
Deficit in scheme		(94,785)		(115,828)
Related deferred tax asset		14,300		17,878
Net pension liability		(80,485)		(97,950)

Sensitivity analysis

Inflation rate and discount rate are considered by the Directors to be the significant assumptions within the scheme, and as such, effects of changes to these have been disclosed below. A movement of +/- 100 bps on the discount rate and inflation assumptions reflects a realistic shift in market conditions over the short-term, whilst providing sufficient information about the sensitivity of the value of the Scheme’s liabilities to these assumptions.

Effect on the deficit in the scheme of the following changes:	£m
1% increase in the discount rate	-75.8
1% decrease in the discount rate	+96.4
1% increase in the inflation rate	+47.4
1% decrease in the inflation rate	-35.2

Reconciliation of present value of plan liabilities and assets:

	2017	2016
	£000	£000
Change in the present value of the defined benefit obligation:		
Opening defined benefit obligation	510,963	409,333
Interest cost	13,356	15,550
Actuarial losses/(gains)	740	107,506
Benefits paid	(32,602)	(21,426)
Closing defined benefit obligation	492,457	510,963
Change in the fair value of plan assets:		
Opening fair value of plan assets	395,135	336,297
Interest income	10,337	12,816
Actuarial gains/(losses)	16,799	61,450
Contributions by employer	8,958	6,875
Benefits paid	(32,602)	(21,426)
Other expenses	(955)	(877)
Closing fair value of plan assets	397,672	395,135

	2017	2016
	£000	£000
Net change in the present value of plan liabilities and assets:		
Opening deficit	115,828	73,036
Net interest cost	3,019	2,734
Net actuarial losses/(gains)	(16,059)	46,056
Contributions by employer	(8,958)	(6,875)
Curtailment and other expenses	955	877
Closing deficit	94,785	115,828

The plan holds a £12,900,000 (2016: £12,900,000) investment in Doosan Power Systems (Scotland) Limited Partnership; this has been included in these consolidated financial statements in accordance with IFRS 10. As such, the building the partnership holds is included in the statement of financial position of the consolidated financial statements, and thus the investment held in the plan assets has been eliminated.

The expected contributions in 2018 are £10,225,000 (2016: £9,375,000).

Analysis of other comprehensive income:

	2017	2016
	£000	£000
Actual return less expected return on scheme assets	16,799	61,450
Experience (losses)/gains arising on the scheme liabilities	—	(3,401)
Changes in assumptions underlying the scheme liabilities	(740)	(104,105)
Net actuarial (loss)/gain recognised in the year	16,059	(46,056)
Deferred tax	(2,672)	7,177
Actuarial (loss)/gain net of tax	13,387	(38,879)
Net cumulative actuarial losses before tax	(125,325)	(138,712)

Expense recognised in the income statement:

	2017	2016
	£000	£000
Net interest expense	3,019	2,734
Other expenses	955	877
Total	3,974	3,611

All of the following items were recognised in administrative expenses and finance costs in the income statement

	2017	2016
	£000	£000
Interest expense	13,356	15,550
Expected return	(10,337)	(12,816)
Other expenses	955	877
Total	3,974	3,611

9.4. Post-retirement benefits – Group – Doosan Lentjes GmbH (Germany)

AE&E Lentjes GmbH operates a defined benefit pension scheme. The Company was acquired at the end of 2011. There are no plan assets and the obligations on the scheme are met by the Company. This scheme was closed to new entrants on 31 October 2011. The employees typically receive fixed pension payments for each year of service.

The main risks to which the Group is exposed on this pension scheme are as follows:

- Mortality risk—the assumptions adopted by the Group make allowance for the future improvements in life expectancy. However, if life expectancy improves at a faster rate than assumed, this would result in higher payments from the scheme and consequently increases the scheme's liabilities.
- Inflation risk—Benefits in the scheme accrued increase in line with inflation (subject to the relevant caps and floors), and so if inflation is greater than expected, the liabilities will increase.

Since there are no assets associated with the scheme there is no investment or yield risk.

The assumptions which have the most effect on the valuation and the contributions paid are as follows:

	2017	2016
Financial assumptions:		
Discount rate	1.9%	1.75%
Rate of increase in pensionable salaries	2.50%	2.50%
Average fluctuation	1.75%	2.00%
Inflation rate	2.00%	2.00%
Demographic assumptions:		
Statistical assumptions	Richttafel 2005G	Richttafel 2005G
Retirement age	RVAGAnpG 2007	RVAGAnpG 2007
Post-retirement mortality for pensioner members (male/ female)	Heubeck Tabellen Richttafel 2005G	Heubeck Tabellen Richttafel 2005G

These assumptions differ from those used for the Doosan Babcock Limited (UK) scheme since the schemes are held by different companies in different jurisdictions.

Reconciliation of present value of plan liabilities:

	2017	2016
	£000	£000
Change in the present value of the defined benefit obligation:		
Opening defined benefit obligation	19,855	15,844
Service cost	422	366
Interest cost	351	402
Employees' contributions	72	81
Actuarial losses	(963)	972
Benefits paid	(437)	(404)
Exchange differences on foreign scheme	727	2,594
Closing defined benefit obligation	20,027	19,855

The defined benefit obligation at the end of 2017 in respect of this plan was £19,772,000 (2016: £19,612,000). In addition to this there is a medical scheme with a net obligation of £256,000 (2016: £244,000).

Sensitivity analysis

Discount rate and Salary rate increase are considered by the Directors to be the significant assumptions within the scheme, and as such, effects of changes to these have been disclosed below. A movement of +/- 100 bps on the discount rate and inflation assumptions reflects a realistic shift in market conditions over the short-term, whilst providing sufficient information about the sensitivity of the value of the Scheme's liabilities to these assumptions.

Effect on the deficit in the scheme of the following changes:	£m
1% increase in the discount rate	-3.1
1% decrease in the discount rate	+4.0
1% increase in the rate of salary increase	+0.004
1% decrease in the rate of salary increase	-0.001

9.5. Post-retirement benefits—Other

All pension schemes in the remainder of the Group are defined contribution in nature and the cost for the year amounted to £229,000 (2016: £350,000).

10. Finance income and costs

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Interest receivable and similar income	2	2	3,227	4,661
Amortisation of gain on loan purchased at below fair value (note 33.2)	—	—	—	—
Exchange gains	—	39,131	—	42,754
Dividend received	3,567	97,630	—	—
Total finance income	3,569	136,763	3,227	47,415
Interest payable	(15,292)	(21,292)	(4,928)	(6,948)
Unwinding of discounting	(566)	(353)	(1,466)	(3,952)
Net finance cost on defined benefit scheme	—	—	(3,370)	(3,048)
Exchange losses	(21,386)	—	(28,860)	—
Total finance costs	(37,244)	(21,645)	(38,624)	(13,948)
Net finance income/(costs)	(33,675)	115,118	(35,397)	33,467

11. Taxation

11.1. Taxation charge

The Company is resident in the UK for tax purposes and not Luxembourg. Management has elected to present the reconciliation between the tax expense and product of account profit multiplied by the tax rate applicable within the UK, UK being the primary location of operation of the group, Management consider this information as more pertinent.

	2017 £000	2016 £000
Current tax:		
UK Corporation tax at 19.25% (2016: 20.00%)	(10)	—
Adjustments in respect of prior years	546	—
	536	—
Taxation outside the UK	4,841	394
Total current tax	5,377	394
Deferred tax:		
Adjustments in respect of prior years	479	(157)
Origination and reversal of temporary differences	(3,508)	5,149
Deferred tax on pension charge	907	509
Total deferred tax (note 22)	(2,122)	5,501
Total tax charge for the year	3,255	5,895

The tax charge for the year is based on the effective United Kingdom statutory rate of corporation tax for the year of 19.25% (2016: 20.00%).

11.2. Factors affecting tax charge for the year

The tax assessed for the year is higher (2016: higher) than the standard rate of corporation tax in the UK (19.25%) (2016: 20.00%). The differences are explained below:

	2017 £000	2016 £000
(Loss)/profit before tax	(65,953)	(625)
(Loss)/profit on ordinary activities multiplied by standard rate of corporation tax in the UK of 19.25% (2016: 20.00%)	(12,696)	(125)
Goodwill Impairment not deductible	—	4,292
Net items (taxable)/not deductible for tax purposes	2,827	(296)
Tax effect of utilisation of tax losses not previously recognised	—	(3,726)
Difference between rate applied and deferred tax rate	—	(16)
Effect of reduction in deferred tax rate	—	1
Other	—	—
Losses not recognised	11,780	5,609
Enhanced relief on research and development expenditure	—	—
Difference in rates of overseas tax	(452)	546
Withholding taxes	771	(231)
Adjustment in respect of prior years	1,025	(159)
Tax charge for year	3,255	5,895

Factors that may affect future tax charges

The income tax expense for the year is based on the effective United Kingdom statutory rate of corporation tax of 19.25% (2016: 20.00%).

The Finance Act 2016 provided for a reduction in the main rate of corporation tax to 17% effective from 1 April 2020 and this rate has been reflected in the calculation of deferred tax at the reporting date.

The closing deferred tax balances (see note 22) as at 31 December 2017 have been calculated at 17% reflecting the tax rate at which the balances are expected to be utilised or reversed in future periods.

The Group has US tax losses with a potential tax value of approximately £55.0m (2016: £57.2m), un-provided UK tax losses of approximately £19.0m (2016: £10.4m), and un-provided German tax losses within Doosan Lentjes GmbH of £42.2m (2016: £37.8m), which may reduce future tax payments; however no deferred tax assets have been recognised in respect of these losses due to the uncertainty over the availability of suitable taxable profits.

11.3. Tax recognised in other comprehensive income

	Before tax	Tax (charge)/ credit	After tax
	£000	£000	£000
2017			
Revaluation of financial instruments treated as cash flow hedges	8,567	(1,575)	6,992
Relating to actuarial movement in retirement benefit obligations	17,022	(2,734)	14,288
Relating to revaluation of land (refer to note 13.1)	940	(169)	771
Translation of foreign operations (see note 26)	49,447	—	49,447
Total income recognised in other comprehensive income	75,976	(4,478)	71,498
2016			
Revaluation of financial instruments treated as cash flow hedges	(1,861)	332	(1,529)
Relating to actuarial movement in retirement benefit obligations	(47,028)	7,177	(39,851)
Translation of foreign operations	70,724	—	70,724
Total income/(expense) recognised in other comprehensive income	21,835	7,509	29,344

12. Intangible fixed assets

12.1. Group

	Goodwill	Patents	Development costs	Software*	Total
	£000	£000	£000	£000	£000
Cost					
At 1 January 2016	366,270	5,325	29,600	38,273	439,468
Foreign exchange translation difference	42,913	878	2,991	1,910	48,692
Additions	—	—	5,268	449	5,717
Disposals	—	—	—	(88)	(88)
Reclassification	—	—	(4,916)	4,916	—
At 31 December 2016	409,183	6,203	32,943	45,460	493,789
Foreign exchange translation difference	25,711	222	1,718	1,642	29,293
Additions	—	—	2,621	678	3,299
Disposals	—	—	—	(107)	(107)
Reclassification	—	—	(870)	870	—
At 31 December 2017	434,894	6,425	36,412	48,543	526,274
Amortisation and impairment					
At 1 January 2016	13,173	4,222	2,710	25,175	45,280
Foreign exchange translation difference	—	743	516	1,498	2,757
Charge for the year	—	1,187	4,366	4,163	9,716
Impairment charge **	21,460	—	—	—	21,460
Disposals	—	—	—	(84)	(84)
At 31 December 2016	34,633	6,152	7,592	30,752	79,129
Foreign exchange translation difference	949	221	481	1,142	2,793
Charge for the year	—	52	4,279	5,213	9,544
Impairment charge **	12,348	—	4,670	—	17,018
Disposals	—	—	—	(105)	(105)
At 31 December 2017	47,930	6,425	17,022	37,002	108,379
Net book value at					
31 December 2016	374,550	51	25,351	14,708	414,660
31 December 2017	386,964	—	19,390	11,541	417,895

* Included within software is the cost of setting up the new enterprise, resource and planning system, Oracle, which went live in 2013. This had a cost of £22,132,000 and net book value of £5,712,000 at the end of the year. This asset has a useful life running until the end of 2019 and the net book value will be amortised evenly over this time.

The charge for amortisation of intangible fixed assets is included within administrative expenses on the income statement.

** The Goodwill impairment relates to Doosan Lentjes Goodwill, see page 42, and Babcock development costs.

The Intangible Assets Impairment relates to a number of technologies within the Lentjes and Babcock part of the Group that would be used in business areas that the Group is no longer pursuing as a result of a change in strategy. The largest item of £2.5m relates to technology for lignite coal which would be used exclusively in North American burners, a market which the Group is no longer active in. All capitalised costs in relation to this technology were written off.

Goodwill acquired in a business combination is maintained separately for each business. All acquisitions made consisted of single cash-generating units (CGUs) and the goodwill has not been split any further. The split between these businesses is shown below.

	2017	Impairment charges For the Year*	Impact of foreign exchange during the year	2016
	£000	£000	£000	£000
Doosan Skoda s.r.o.	266,590	—	23,396	243,194
Nuclear decommissioning (Doosan Power Systems Limited)	546	—	—	546
Doosan Lentjes GmbH	32,599	(12,348)	1,365	43,582
Doosan Babcock Limited	87,228	—	—	87,228
	386,964	(12,348)	24,762	374,550

* The Group tests goodwill annually for impairment or more frequently if there are indicators that the goodwill might be impaired. The recoverable amounts from these CGUs are determined from value-in-use calculations. They are based on detailed business plans stretching over the next five years which are derived from expected on-going work from existing customers and new potential contracts when they are likely to be won. These projections are approved by the Board.

The pre-tax discount rates used in the goodwill tests for each CGU are as follows:

	Pre Tax Rate	Post Tax Rate
Doosan Babcock Limited (UK)	9.4%	7.8%
Doosan Lentjes GmbH (Germany)	10.7%	7.5%
Doosan Skoda s.r.o. (Czech Republic)	9.8%	7.9%

These different rates are based on varying country risk premiums in the calculation. The cash flows calculated for each impairment test have been discounted using the post-tax discount rates noted above calculated by applying updated market inputs to the capital asset pricing model.

Cash flow projections beyond the five year period have been extrapolated on the basis of a 2% growth rate. Such a growth rate does not exceed the long-term average growth rate of the sector.

Doosan Lentjes GmbH goodwill value has been impaired by €14.1m (£12.3m) bringing the held value to €36.2m (£32.6m). The impairment has been allocated in full against the goodwill balance on the Consolidated Statement of Financial Position. Doosan Lentjes is a separately identifiable reporting segment under IFRS 8 as shown in note 5 of the accounts. The impairment charge principally reflects a reduction in the expected future cash flows of the business arising from its project pipeline. This valuation has been arrived at through a value in use calculation.

The following table shows the effect that changes in discount rate, growth rate and gross margin assumptions would have on this valuation. In the case of gross margin it is the effect of a 5% increase or decrease of the gross margin included in future cash flows along with its resultant reduction in overheads.

Lentjes Sensitivity Analysis	Rate	-1% £m	+1% £m
Discount Rate	7.5%	(12.0)	8.3
Growth Rate	2%	(6.7)	9.7
Gross Margin	+/-5%	5.5	(5.5)

The total recoverable amount of the CGU, using the value in use model is €38.7m (£34.4m) and is represented in the accounts as €2.0m (£1.8m) fixed assets of the Lentjes business and €36.2m (£32.2m) of Goodwill.

12.2. Company

The company has no intangible fixed assets (2016: £nil).

13. Property, plant and equipment

13.1. Group

	Land	Buildings	Plant and equipment	Assets in the course of construction	Total
	£000	£000	£000	£000	£000
Cost					
At 1 January 2016	12,367	48,957	151,374	5,427	218,125
Foreign exchange translation difference	1,013	5,314	13,306	645	20,278
Additions	—	46	2,870	7,485	10,401
Disposals	—	—	(2,477)	—	(2,477)
Reclassification	—	229	1,966	(2,195)	—
At 31 December 2016	13,380	54,546	167,039	11,362	246,327
Foreign exchange translation difference	703	3,755	9,059	559	14,076
Additions	—	93	3,582	1,193	4,868
Disposals	—	(15)	(10,407)	—	(10,422)
Revaluation	940	—	—	—	940
Reclassification	—	1,314	7,832	(9,146)	—
At 31 December 2017	15,023	59,693	177,105	3,968	255,789
Depreciation					
At 1 January 2016	—	15,806	120,656	34	136,496
Foreign exchange translation difference	—	1,231	9,495	5	10,731
Charge for the year	—	1,741	8,722	—	10,463
Disposals	—	—	(2,421)	—	(2,421)
At 31 December 2016	—	18,778	136,452	39	155,269
Foreign exchange translation difference	—	987	6,372	4	7,363
Charge for the year	—	1,834	8,558	—	10,392
Disposals	—	(15)	(10,224)	—	(10,239)
At 31 December 2017	—	21,584	141,158	43	162,785
Net book value at					
31 December 2016	13,380	35,768	30,587	11,323	91,058
31 December 2017	15,023	38,109	35,947	3,925	93,004

In November 2017 a revaluation of land assets was performed by an independent valuer. This was done in order to comply with the accounting policy adopted by the parent group to reflect a more appropriate valuation of land in the Group and follow the treatment allowed by IAS16. This resulted in an increase in value of £940,000. Had the revaluation not been performed the carrying value of the land would have been £14,087,000. If the assets been accounted for using the cost model the carrying value of the land would have been £10,106,000.

Capital grants to the value of £435,000 (2016: £178,000) have been received to fund construction of equipment used in research and development and net against the assets to which they relate. The net cost of the equipment is then depreciated over five years and charged to the projects which it is being used for.

The net book value of buildings comprises:

	2017	2016
	£000	£000
Freehold	37,445	35,059
Leasehold – short	664	710
	38,109	49,148

There are no restrictions on title given to banks of any fixed assets held by the Group.

13.2. Company

	Land and Buildings	Plant and equipment	Total
	£000	£000	£000
Cost			
At 31 December 2016 and 31 December 2017	85	294	379
Depreciation			
At 31 December 2016	26	292	318
Charge for the year	11	2	13
31 December 2017	37	294	331
Net book value at			
31 December 2016	59	2	61
31 December 2017	48	0	48

14. Subsidiaries, associates and investments

	Partnership	Subsidiaries	Total
	£000	£000	£000
Company – shares in subsidiary undertakings and partnerships			
Cost			
At 1 January 2016	3,664	843,504	847,168
At 31 December 2016	3,664	843,504	847,168
31 December 2017	3,664	843,504	847,168
Impairment			
At 1 January 2016	—	(35,033)	(35,033)
Impairment charge *	—	(72,522)	(72,522)
At 31 December 2016	—	(107,555)	(107,555)
Impairment charge	—	—	—
31 December 2017	—	(107,555)	(107,555)
Net book value at			
31 December 2016	3,664	735,949	739,613
31 December 2017	3,664	735,949	739,613

* The impairment relates to the investment in Doosan Power Systems Holdings Limited. This company transferred all of its assets up to the Company through a dividend. This reduced the net book value of Doosan Power Systems Holdings and hence the Company's investment in it to zero.

	Bonds	Investment in associates	Available-for-sale investments	Total
	£000	£000	£000	£000
Group				
Cost				
At 1 January 2016	—	—	785	785
Impairment	—	—	(462)	(462)
At 31 December 2016	—	—	323	323
Impairment	—	—	—	—
At 31 December 2017	—	—	323	323

The available-for-sale investment relates to a 7.35% holding in HTC Purenergy Inc., 0.5% holding in Doosan Power Systems India Private Limited (DPSIPL) and a 5% holding in Guangzhou Skoda-Jinma Turbine Limited Company.

All 100% owned unless otherwise stated:	Notes		Registered Office
Principal subsidiary undertakings:			
Doosan Babcock Limited		A	Doosan House, Crawley Business Quarter, Manor Royal, Crawley, RH10 9AD, UK
Doosan Babcock Energy Services (Overseas) Limited	2	A	Doosan House, Crawley Business Quarter, Manor Royal, Crawley, RH10 9AD, UK
Doosan Babcock Energy Technologies (Shanghai) Limited	1	A	12F, No. 1088 Fangdian Road, Zizhu International Building, Pudong New Area,Shanghai 201204, China
Doosan Power Systems Americas LLC	2	A	1050 Crown Pointe Parkway, Suite 1200, Atlanta, GA 30338, USA
Doosan Babcock Energy Polska Sp. z.o.o. (98.90%)	1	A	Podmiejska 7, Rybnik, Poland
Doosan Babcock Energy Germany GmbH	3	A	Droßiger Weg 56, D-06188 Landsberg OT Hohenthurm, Germany
Doosan Škoda Power s.r.o. (formerly Škoda Power s.r.o.)		A	Tylova 1/57, Plzen, 301 28, Czech Republic
Doosan Lentjes GmbH	3	A	Daniel Goldbach Str.19, Ratingen 4880, Germany
Other subsidiary undertakings:			
Doosan Power Systems Overseas Investments Limited	2	B	Doosan House, Crawley Business Quarter, Manor Royal, Crawley, RH10 9AD, UK
Doosan Power Systems Pension Trustee Company Limited	2	C	Doosan House, Crawley Business Quarter, Manor Royal, Crawley, RH10 9AD, UK
Doosan Power Systems Europe GmbH	1	A	Daniel Goldbach Str.19, Ratingen 40880, Germany
Skoda Power Private Limited	4	A	Tower B, DLF Building No 8, DLF Cyber City, Gurgaon, Haryana, India
Doosan Lentjes UK Limited (formerly AE&E Lentjes UK Limited)	5	A	Doosan House, Crawley Business Quarter, Manor Royal, Crawley, RH10 9AD, UK
Doosan Lentjes Czech s.r.o. (formerly AE & E Lentjes Praha s.r.o.)	5	A	Sokolovská 668/136d, 18600 Praha 8, Czech Republic
Doosan Power Systems (Scotland) Limited Partnership (31.25%)	7	E	Porterfield Road, Renfrew, UK, PA4 8DJ
Doosan Babcock W.L.L (49%)	6	A	Office 1449, Al Fardan Office Tower, 14th Floor, PO Box 31316, Doha Qatar
Doosan Babcock General Maint Services L.L.C. (49%).	6	A	21st Floor Tamouh Tower Al Reem Island Abu Dhabi UAE PO Box 31234
Available-for-sale investment:			
HTC Purenergy Inc. (7.35%)	1	D	002 2305 Victoria Avenue, Regina, Saskatchewan, S4P OS7, Canada
Doosan Power Systems India Private Limited (0.5%)	1	A	DLF Square Building, DLF Phase 2, Gurgaon, Haryana, India
Guangzhou Skoda-Jinma Turbine Limited Company (5%)	4	A	33 Chang Gang Zhong Road, Guangzhou, China

Notes on holdings

1 Indirectly held through Doosan Power Systems Overseas Investments Limited
2 Indirectly held through Doosan Babcock Limited
3 Indirectly held through Doosan Power Systems Europe GmbH
4 Indirectly held through Skoda Power s.r.o.
5 Indirectly held through Doosan Lentjes GmbH

6 Indirectly held through Doosan Babcock Limited. Whilst the shareholding of these companies is 49%, Doosan Babcock exercises control over them through holding 3-1 positions on the board, appointing its own local General manager and having entitlement to 90% of profits from these companies. Therefore the Directors consider that Doosan Babcock exercises full control over these two companies and are treating them as subsidiaries accordingly.

7 The holding of 31.25% in the SLP represents the Capital Contribution which made by the Company into the SLP when it was first set up. It is set out in the Partnership agreement that the Company has exclusive responsibility for the management and control of the partnership and has full power and authority to do all things necessary to carry out the purposes of the partnership. As such the Company is deemed to have control over the Partnership and under IFRS 10 is full consolidated into the Group accounts.

A Non-controlling interest was shown in the accounts in respect of these companies for the first time this year as previously the amounts were not material. It relates to the 51% share held in each of these two companies that is held by a third party outside of the Doosan group. These companies were set up by the Group in 2013.

Doosan Power Systems Holdings Limited was liquidated on 23 May 2017.

Doosan Lentjes Belgium N.V. (formerly AE & E Lentjes Belgie N.V.) was liquidated on 31 March 2016.

Notes on nature of business

A Providing high value-added energy services and innovative technology led business solutions to the power generation industry and associated markets

B Holding company

C Dormant company

D Research and development of innovative technology for the power generation industry

E Partnership providing for the pension scheme

15. Financial instruments

Accounting policies

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised in respect of each class of financial asset and financial liability are set out in note 2.23.

Capital risk management

The Group manages its capital to ensure its ability to continue as a going concern and to maintain its optimal capital structure. The capital structure of the Group consists of equity, loans and retained earnings ultimately attributable to Doosan Heavy Industries & Construction Co., Ltd, a Company based and registered in the Republic of Korea.

The Group manages its capital with the clear goal of optimising revenues, costs and assets of its individual operations, ensuring sufficient liquidity at all times. This ensures that all Group companies can operate on a going concern basis.

The Group's capital structure consists of common stock, perpetual bonds, capital reserves and retained earnings.

15.1. Group

15.1.a. Categories of financial instruments

	Receivables/(Payables) at amortised cost, cash and cash equivalents	Financial assets/ (liabilities) at amortised cost	Available-for-sale financial assets	Derivatives	Total
	£000	£000	£000	£000	£000
2017					
Financial assets					
Cash and cash equivalents	156,734	—	—	—	156,734
Trade and other receivables	219,278	—	—	—	219,278
Derivatives	—	—	—	9,231	9,231
Available-for-sale investments	—	—	324	—	324
Total Financial assets	376,012	—	324	9,231	385,567
Financial liabilities					
Trade and other payables	(166,391)	—	—	—	(166,391)
Derivatives	—	—	—	(25,340)	(25,340)
Borrowings	—	(105,382)	—	—	(105,382)
Total Financial liabilities	(166,391)	(105,382)	—	(25,340)	(297,113)

	Receivables/(Payables) cash and cash equivalents	Financial assets/ (liabilities) at amortised cost	Available-for-sale financial assets	Derivatives	Total
	£000	£000	£000	£000	£000
2016					
Financial assets					
Cash and cash equivalents	166,348	—	—	—	166,348
Trade and other receivables	240,797	—	—	—	240,797
Derivatives	—	—	—	6,917	6,917
Available-for-sale investments	—	—	323	—	323
Total Financial assets	407,145	—	323	6,917	414,385
Financial liabilities					
Trade and other payables	(185,813)	—	—	—	(185,813)
Derivatives	—	—	—	(5,343)	(5,343)
Borrowings	—	(83,489)	—	—	(83,489)
Total Financial liabilities	(185,813)	(83,489)	—	(5,343)	(274,645)

In the opinion of the Directors, the carrying amount of financial assets and liabilities are a reasonable approximation of fair value.

Aside from derivatives and borrowings, substantially all financial assets and liabilities of the Group are due within one year.

15.1.b. Derivatives – Financial Instruments

All derivative assets and liabilities on the statement of financial position relate to foreign exchange hedges against cash flows and fair value movements.

The cash flow hedges are in place in order to mitigate the effect of movements in exchange rates on income receivable on long-term contracts, expenses to be paid in relation to contracts which will not occur in the currency of the entity and to mitigate the effect of movements in exchange rates and interest rates on the repayment of bank loans. These hedges protect against movements in Pound Sterling against the US Dollar, Euro and Czech Koruna transactions in the Group, the Czech Koruna in the subsidiary Doosan Skoda s.r.o. and the Euro value of the bank loans. Certain forward currency contracts were not designated for hedge accounting.

During the year £8,567,000 (2016: £1,861,000 credited) was charged to the hedging reserve and was recognised in the statement of other comprehensive income in respect of hedges which were effective. £18,291,000 (2016: £2,082,000 credited) was charged to the income statement in respect of the cash flow hedges which were deemed to be ineffective under IFRS rules. £4,588,000 (2016: £5,526,000) was released from equity into the income statement in respect of hedges which had matured or expired.

	Current assets	Non-current assets	Total	Current liabilities	Non-current liabilities	Total
	£000	£000	£000	£000	£000	£000
2017						
At fair value through profit or loss	3,004	1,144	4,148	(24,259)	(21)	(24,280)
Designated as cash flow hedges	4,490	593	5,083	—	(1,060)	(1,060)
Total	7,494	1,737	9,231	(24,259)	(1,081)	(25,340)
2016						
At fair value through profit or loss	4,041	2,189	6,230	(150)	(801)	(951)
Designated as cash flow hedges	201	486	687	(3,173)	(1,219)	(4,392)
Total	4,242	2,675	6,917	(3,323)	(2,020)	(5,343)

The table below shows the maturity profile of derivatives and hence when the effect of their exercise will be seen as cash flow:

	2017 Receivable	2017 Payable	2017 Total	2016 Receivable	2016 Payable	2016 Total
	£000	£000	£000	£000	£000	£000
Maturing within:						
One year	499,098	(516,535)	(17,437)	310,546	(309,634)	912
One to two years	47,585	(47,243)	342	307,288	(307,026)	262
Two to five years	62,804	(61,818)	986	23,276	(22,876)	400
Total	609,487	(625,596)	(16,109)	641,110	(639,536)	1,574

The table below shows the maturity profile of financial payables excluding future interests:

	2017 Trade and Other Payables	2017 Borrowings	2017 Total	2016 Trade and Other Payables	2016 Borrowings	2016 Total
	£000	£000	£000	£000	£000	£000
Maturing within:						
One year	165,125	47,185	212,310	184,316	54,202	238,518
One to two years	1,266	58,197	59,463	1,497	29,287	30,784
Total	166,391	105,382	271,773	185,813	83,489	269,302

15.1.c. Fair value estimation

The Group holds certain financial instruments on the statement of financial position at their fair value. The following table provides an analysis of those that are measured subsequent to initial recognition at fair value through profit or loss, grouped into levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1, that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices). Specifically the value of these assets and liabilities are determined by measuring the difference between the exchange rate at the reporting date and the forward exchange rate per the contract; and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs). The investment is held at cost value less any impairment which has occured.

There have been no transfers between these categories in the current or preceding year.

	Level 1	Level 2	Level 3	Total
	£000	£000	£000	£000
2017				
Available-for-sale investment	—	—	—	324
Financial assets – foreign currency contracts	—	9,231	—	9,231
Total assets measured at fair value	—	9,231	—	9,555
Financial liabilities – foreign currency contracts	—	(25,340)	—	(25,340)
Total liabilities measured at fair value	—	(25,340)	—	(25,340)
2016				
Available-for-sale investment	—	—	—	323
Financial assets – foreign currency contracts	—	6,917	—	6,917
Total assets measured at fair value	—	6,917	—	7,240
Financial liabilities – foreign currency contracts	—	(5,343)	—	(5,343)
Total liabilities measured at fair value	—	(5,343)	—	(5,343)

15.1.d. Financial risk factors

The Group's activities expose it to a variety of risk factors: market risk, liquidity risk, exchange rate risk, credit risk and interest rate risk. The Group's risk management strategy seeks to minimise the potential adverse effects of these risks on the Group's financial performance.

Financial risk management is carried out centrally by Group treasury under policies approved by the Board. Group treasury liaises with the Group's operating companies to identify, evaluate and hedge financial risks. The Group uses derivative financial instruments to hedge risk exposures. The Group does not trade in financial instruments for speculative purposes.

a) Market risk

The primary market risk that the group is exposed to arises in the defined benefit pension scheme. The Group is exposed to the performance of the assets invested in equities and bonds as well as the impact on liabilities of movements in bond rates and other actuarial assumptions which can vary significantly over time. To tackle these risks the Group has taken a number of actions over the previous years including closing the scheme to future new entrants, future accruals and increasing contributions. There is an investment sub-committee jointly appointed by the Company and Pension Trustees in addition to the financial advisers appointed by the Trustees who aim to optimise the performance of the scheme's assets. Asset selection is undertaken to match the future liabilities of the scheme, a large proportion of the assets are held in fixed income investments, so that movements in asset and liabilities are correlated to mitigate market risk.

b) Liquidity risk

The Group manages liquidity risk by maintaining adequate cash balances and banking facilities in its subsidiary company Doosan Babcock Ltd, continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities. Group policy is to maintain a fixed percentage of surplus cash on instant access bank accounts and money market funds in order to cover any unexpected shortfall in cash.

c) Exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from exposure to various currencies, primarily to US Dollars, Euros and Czech Koruna whilst the functional currency of the Company is in Pound Sterling as are the operations of its primary subsidiary company Doosan Babcock Ltd. Foreign exchange risk arises from future trading transactions, assets and liabilities and net investments in foreign operations.

Group policy requires operating companies to manage their transactional foreign exchange risk against their functional currency. Group treasury enters into forward contracts on behalf of operating companies to cover foreign exchange transaction risk above pre-set materiality levels determined by the Chief Financial Officer whenever a current or future foreign currency exposure is identified with sufficient reliability.

Hedge accounting is applied to these transactions above a predetermined materiality level.

The Group's investments in foreign operations are exposed to foreign currency translation risk which is managed by matching significant net assets denominated in currencies other than sterling principally with liabilities (through borrowings) in the same currency.

The Group is also exposed to tender exchange rate risk, which is the risk of financial loss as a result of adverse exchange rate movements during the tender period. The Group manages this risk by agreeing price adjustment formulae with the customer where possible and also by including an appropriate level of contingency in the tender exchange rates used.

Details of forward foreign exchange contracts outstanding at the reporting date in respect of foreign currency transaction exposures are set out in note 15.1.b above.

The notional principal amounts of foreign exchange contracts in respect of foreign currency transactions where hedge accounting is not applied is £439m (2016: £396m). The period during which the cash flows are expected to occur is up to three years.

d) Commodity risk

The Group is exposed to commodity price risk in its normal operations. This risk is managed by agreeing escalation formulae in commercial contracts with customers that enables the Group to recover any losses incurred as a result of an increase in the price of a commodity.

e) Credit risk

Credit risk is the risk that the counterparty will default on its contractual obligations, resulting in financial loss. Credit risk arises from cash and cash equivalents, derivative financial instruments and credit exposures to customers, including outstanding receivables and committed transactions. The Group also has a policy of assessing the creditworthiness of potential customers before entering into transactions.

For cash and cash equivalents and derivative financial instruments the Group has a policy of depositing funds only with independently rated counterparties with a minimum Fitch short and long-term credit rating of F1/A. Management monitors the utilisation of these credit limits regularly.

For trade and other receivables credit evaluation is performed on the financial condition of accounts receivable using independent ratings where available or by assessment of the customer's credit quality based on its financial position, past experience and other factors. Where deemed necessary, the Group will insist upon a bank guarantee or parent company guarantee before entering into a contract with counterparty.

The carrying amount of financial assets recorded in the financial statements, which is net of impairment losses, represents the Group's maximum exposure to credit risk.

f) Interest rate risk

Interest rate risk is currently considered to be low due to market conditions and as a result all interest is paid on a variable rate basis. This is constantly under review by Group Treasury and should the risk increase loans may be switched to a fixed rate basis.

Loans outstanding at the end of 2017:

- Loan with Korea Development Bank of €65.8m (£58.1m) (2016: €66.7m (£57.2m)) is in Euros. There are no hedges against the interest rate of 3m EURIBOR + 2.75%.
- Loan with Woori Bank of £22.5m (2016: £25m) is in Pound Sterling. There are no hedges against the interest rate of 3m LIBOR + 1.8%.
- Revolving credit facility with Standard Chartered Bank which was fully utilised with an amount of £16.8m at 31 December 2017 (2016: £Nil). There are no hedges against the interest rate of 3m LIBOR +2.75%.
- Overdraft facility with notional pooling agreement with HSBC for £50m (2016: £40m) of which £7.9m was utilised at the 31 December 2017 (2016: £Nil) with an interest rate of Bank of England Base Rate + 2.75%.
- Loan with HSBC of AED 3.4m (£0.7m) (2016: AED 6.4m (£1.3m)). There are no hedges against the interest rate of EIBOR + 3%.

A 1% increase in interest rates would have resulted in an additional £1,210,000 (2016: £822,000) of interest payable. A 1% reduction in interest rates would have resulted in a reduction in interest payable of £1,210,000 (2016: £822,000). This is calculated by adding up the net of all interest paid and received during the year on all loans that are not fixed interest and estimating what the charge would have been if interest rates were 1% higher or lower. All the loans are based on Libor or Euribor and so are unlikely to be subject to large fluctuations in interest rates, therefore 1% is considered a reasonable movement on which to base the calculation.

15.1.e. Summary of financial instruments in currencies

The below figures are all stated as GBP equivalents.

	GBP	CZK	USD	EUR	KRW	Other	Total
	£000	£000	£000	£000	£000	£000	£000
2017							
Cash, cash equivalents and other financial assets	3,155	103,680	9,044	31,426	2	9,427	156,734
Financial derivatives	5,207	4,023	—	—	—	1	9,231
Trade and other receivables	103,051	72,133	7,014	15,105	—	21,975	219,278
Total	111,413	179,836	16,058	46,531	2	31,403	385,243
Financial derivatives	(25,034)	—	—	(305)	—	(1)	(25,340)
Trade and other payables	(101,740)	(36,577)	—	(22,693)	—	(5,381)	(166,391)
Borrowings	(26,377)	—	(118)	(78,540)	—	(347)	(105,382)
Total	(153,151)	(36,577)	(118)	(101,538)	—	(5,729)	(297,113)
Net total	(41,738)	143,259	15,940	(55,007)	2	25,674	88,130
2016							
Cash, cash equivalents and other financial assets	4,836	107,153	22,250	23,175	2	8,932	166,348
Financial derivatives	6,222	687	—	8	—	—	6,917
Trade and other receivables	120,358	78,037	15,074	18,334	—	8,994	240,797
Total	131,416	185,877	37,324	41,517	2	17,926	414,062
Financial derivatives	(952)	(4,391)	—	—	—	—	(5,343)
Trade and other payables	(90,914)	(49,276)	(2,413)	(30,405)	—	(12,805)	(185,813)
Borrowings	(26,183)	—	(16)	(57,205)	—	(85)	(83,489)
Total	(118,049)	(53,667)	(2,429)	(87,610)	—	(12,890)	(274,645)
Net total	13,367	132,210	34,895	(46,093)	2	5,036	139,417

The Group has assets and liabilities in foreign currencies, principally US Dollars, Euros and Czech Koruna. The effect on the income statement of a 20% movement in the rates would be £26.1m each way.

This was calculated by adding up the value of all assets and liabilities held in all companies in the Group which were not in their local currency and converting the amounts into Pound Sterling. The risk is then assumed to be 20% of this amount. It was assumed there would be no exposure arising from assets and liabilities held in the local currency of each entity in the group, but that all of other assets and liabilities would be affected.

Given the fluctuations in our principal foreign currencies, which are noted above, against the Pound Sterling during and after the year-end, the directors have determined that 20% fluctuations from the year-end rates are a reasonable possibility and have therefore used this percentage as a basis for their assessment.

15.2. Company

15.2.a. Categories of financial instruments

	(Payables)/receivables at amortised cost, cash and cash equivalents	Financial assets/(liabilities) at amortised cost	Available for sale financial assets	Derivatives	Total
	£000	£000	£000	£000	£000
2017					
Financial assets					
Cash and cash equivalents	15,591	—	—	—	15,591
Trade and other receivables	790	—	—	—	790
Loans to group undertakings	—	101,001	—	—	101,001
Investments	—	—	739,614	—	739,614
Derivatives	—	—	—	3,795	3,795
Total	16,381	101,001	739,614	3,795	860,791
Financial liabilities					
Trade and other payables	(7,332)	—	—	—	(7,332)
Derivatives	—	—	—	(24,038)	(24,038)
Bank loans	—	(79,764)	—	—	(79,764)
Loans from Group undertakings	—	(503,785)	—	—	(503,785)
Total	(7,332)	(583,549)	—	(24,038)	(614,919)
2016					
Financial assets					
Cash and cash equivalents	3,489	—	—	—	3,489
Trade and other receivables	125	—	—	—	125
Loans to group undertakings	—	74,712	—	—	74,712
Investments	—	—	739,613	—	739,613
Derivatives	—	—	—	5,574	5,574
Total	3,614	74,712	739,613	5,574	823,513
Financial liabilities					
Trade and other payables	(9,397)	—	—	—	(9,397)
Derivatives	—	—	—	(737)	(737)
Bank loans	—	(82,204)	—	—	(82,204)
Loans from Group undertakings	—	(441,906)	—	—	(441,906)
Total	(9,397)	(524,110)	—	(737)	(534,244)

15.2.b. Derivatives – Financial instruments

	Current assets	Non-current assets	Total	Current liabilities	Non-current liabilities	Total
	£000	£000	£000	£000	£000	£000
2017						
At fair value through profit or loss	2,879	916	3,795	(24,038)	—	(24,038)
Total	2,879	916	3,795	(24,038)	—	(24,038)
2016						
At fair value through profit or loss	3,608	1,966	5,574	—	(737)	(737)
Total	3,608	1,966	5,574	—	(737)	(737)

The table below shows the maturity of the derivatives and hence when the effect of their exercise will be seen as cash flow:

	2017 Receivable	2017 Payable	2017 Total	2016 Receivable	2016 Payable	2016 Total
	£000	£000	£000	£000	£000	£000
Maturing within:						
One year	353,646	(374,805)	(21,159)	151,974	(148,366)	3,608
One to two years	—	—	—	272,614	(271,385)	1,229
Two to five years	58,127	(57,211)	916	—	—	—
Total	411,773	(432,016)	(20,243)	424,588	(419,751)	4,837

The table below shows the maturity profile of financial payables excluding future interests:

	2017 Trade and Other Payables	2017 Borrowings	2017 Total	2016 Trade and Other Payables	2016 Borrowings	2016 Total
	£000	£000	£000	£000	£000	£000
Maturing within:						
One year	7,332	22,500	29,832	9,397	53,602	62,999
One to two years	—	57,264	57,264	—	28,602	28,602
Total	7,332	79,764	87,096	9,397	82,204	91,601

15.2.c. Fair value estimation

The Company figures for fair value estimation are the same as those for the Group set out in note 15.1.c.

15.2.d. Financial risk factors

a) Market risk

Market risk is the risk that fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk for the Company may arise from open positions in foreign currencies and fluctuation of interest rates.

b) Credit risk

Credit risk is the risk that a counter-party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities and deposits with banks and financial institutions.

c) Interest rate risk

The Company's interest rate risk is the same as that of the Group as set out in note 15.1.d

d) Liquidity risk

The Company manages liquidity risk by maintaining adequate cash balances and banking facilities, loans granted by the Group, continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

e)Exchange rate risk

The Company operates primarily as a holding company for the Group and also holds some of the Group debt. It is exposed to foreign exchange risk arising primarily in Euros, and US Dollars. Whilst the functional currency of the Company is in Pound Sterling as are the operations of its primary subsidiary company Doosan Babcock Ltd. foreign exchange risk arises from exposure on 3rd party and Intercompany loans in Euros and Czech Koruna along with the Perpetual Bond which is denominated in USD and whose dividends are paid in USD. There is very limited exposure on much smaller trading transactions in these and other currencies.

Company policy requires it to manage its transactional foreign exchange risk against its functional currency. Group treasury enters into forward contracts on behalf of the Company to cover foreign exchange transaction risk above pre-set materiality levels determined by the Chief Financial Officer whenever a current or future foreign currency exposure is identified with sufficient reliability.

The Company's investments in foreign operations are exposed to foreign currency translation risk which is managed by matching significant net assets denominated in currencies other than sterling principally with liabilities (through borrowings) in the same currency.

The notional principal amounts of foreign exchange contracts in respect of foreign currency transactions where hedge accounting is not applied is £412m (2016: £425m). The period during which the cash flows are expected to occur is up to three years.

15.2.e. Summary of financial instruments by currency

The below figures are stated as GBP equivalents.

	GBP	CZK	USD	EUR	Other	Total
	£000	£000	£000	£000	£000	£000
2017						
Cash and cash equivalents	15,585	—	—	—	6	15,591
Financial derivatives	3,795	—	—	—	—	3,795
Trade and other receivables	784	—	—	—	6	790
Loans to Group undertakings	1,698	—	—	99,302	1	101,001
Total	21,862	—	—	99,302	13	121,177
Trade and other payables	(7,251)	—	—	(9)	(72)	(7,332)
Derivatives	(24,038)	—	—	—	—	(24,038)
Loans from Group undertakings	(368,607)	(75,623)	(90)	(58,641)	(824)	(503,785)
Bank loans	—	—	—	(79,764)	—	(79,764)
Total	(399,896)	(75,623)	(90)	(138,414)	(896)	(614,919)
Net total	(378,034)	(75,623)	(90)	(39,112)	(883)	(493,742)
2016						
Cash and cash equivalents	3,254	1	130	103	1	3,489
Financial derivatives	5,574	—	—	—	—	5,574
Trade and other receivables	125	—	—	—	—	125
Loans to Group undertakings	—	—	—	74,712	—	74,712
Total	8,953	1	130	74,815	1	83,900
Trade and other payables	(6,883)	—	—	(2,514)	—	(9,397)
Derivatives	(737)	—	—	—	—	(737)
Loans from Group undertakings	(358,282)	(40,716)	—	(42,908)	—	(441,906)
Bank loans	(25,000)	—	—	(57,204)	—	(82,204)
Total	(390,902)	(40,716)	—	(102,626)	—	(534,244)
Net total	(381,949)	(40,715)	130	(27,811)	1	(450,344)

The Company has assets and liabilities in foreign currencies, principally US Dollars and Euros. The effect on the income statement of a 20% movement in the rates would be £1.9m each way.

16. Inventories

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Raw materials and consumables	—	—	14,725	12,860
Inventory allowance	—	—	(5,420)	(4,767)
Work-in-progress	—	—	1,027	1,347
	—	—	10,332	9,440

17. Trade and other receivables

17.1. Trade and other receivables

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Current:				
Trade receivables	—	19	84,846	89,297
Loss provision for impairment of receivables	—	—	(19,454)	(22,014)
Amounts owed by parent undertakings	101	101	21,246	22,627
Amounts owed by Group undertakings	101,661	74,713	—	—
Other Taxes receivable	—	—	1,933	—
Other receivables	181	224	8,943	8,215
Prepayments and accrued income	3	26	17,655	19,671
	101,946	75,083	115,169	117,796

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Non-Current:				
Trade receivables	—	—	5,829	—
	—	—	5,829	—

This Non-current receivable relates to a long term contract and the aging of which is in line with its payment terms. Management expectation is that this receivable will be collected in line with these terms.

17.2. Valuation allowance for receivables

The Directors consider that the carrying values of current trade and other receivables approximate their fair values. It is Group policy to hedge against net cash inflows in foreign currencies, which may not necessarily equal the revenues received from invoicing trade receivables.

Based on prior experience and an assessment of the current economic environment, management believes there is no further credit risk provision required in respect of trade receivables.

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Movement in provision				
Opening balance	—	—	(22,014)	(17,125)
Currency translation difference	—	—	(1,581)	(2,670)
Utilised in year	—	—	2,997	2,142
Charged to the income statement:				
Additional provisions	—	—	(2,141)	(5,328)
Unused amounts reversed	—	—	3,285	967
	—	—	(19,454)	(22,014)

The provision for impairment of trade receivables is based on a review of financial circumstances of individual customers. The ageing of the impaired receivables based on due date is as follows:

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Up to 3 months	—	—	—	1,089
3 to 6 months	—	—	—	9
6 to 12 months	—	—	130	460
Over 12 months	—	—	19,324	20,456
	—	—	19,454	22,014

The trade receivables disclosed above include amounts which are past due at the reporting date, but against which the Group has not recognised an allowance for doubtful receivables because there has not been a significant change in credit quality and we have strong relationships with most of our customers. The Group does not hold any collateral or other credit enhancements over these balances, nor does it have a legal right of offset against any amounts owed by the Group to the counterparty.

At 31 December 2017 trade and other receivables in the group of £14,951,000 (2016: of £24,285,000) were past due, but not impaired. The figure for the Company was £Nil (2016: £19,000). These relate to a number of customers for which there is no reason to believe that their debt is not recoverable. The ageing analysis of these receivables is as follows:

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Up to 3 months	—	19	7,255	15,259
3 to 6 months	—	—	811	2,470
6 to 12 months	—	—	126	1,465
Over 12 months	—	—	6,759	5,091
	—	19	14,951	24,285

18.Trade and other payables – current

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Trade payables	222	543	51,994	66,593
Amounts owed to parent undertakings	3	3	12,166	8,980
Amounts owed to Group undertakings	3,656	5,160	—	—
Other payables including taxation and social security	1,856	2,380	54,193	49,263
Accruals and deferred income	1,595	3,208	77,018	88,032
	7,332	11,294	195,371	212,868

Trade payables and accruals principally comprise amounts outstanding for trade purchases and on-going costs. The average credit period taken for trade purchases is 50 days (2016: 55 days). For most suppliers no interest is charged on overdue invoices. The Group has financial risk management policies in place to ensure that all payables are paid within the pre-agreed credit terms. The Directors consider that the carrying amount of trade payables approximates to their fair value.

19. Trade and other payables – non-current

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Trade payables	—	—	127	196
Other payables	—	1,333	—	1,332
	—	1,333	127	1,528

20. Borrowings

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Current	22,500	53,602	39,327	54,202
Intercompany – Current	503,785	441,906	—	—
Bank Overdrafts	—	—	7,859	—
Non-current	57,265	28,603	58,196	29,287
	583,550	524,111	105,382	83,489

Included in borrowings at 31 December 2017 are the following:

- Loan with Korea Development Bank of £58.1m (€65.8m) (2016: £57.2m (€66.7m)) which is denominated in Euros. At the year-end date the interest rate was 3m EURIBOR + 2.75%. The loan is repayable over 2 instalments 40% of the loan in repayable on 20 January 2020, with the remaining 60% repayable on 21 January 2021.
- Loan with Woori Bank of £22.5m (2016: £25m). The repayment of this loan is scheduled for 30 November 2018. The interest rate on this loan is 3m LIBOR + 1.8%. This loan matures in 2018 and is classed as current. The loan is held by the Company.
- Loan with HSBC of £0.7m (AED3.6m) (2016: £1.3m (AED6.4m)), which is denominated in Emirati Dirham. This loan is scheduled to be repaid by 24 monthly instalments with the final instalment due to be repaid by August 2018. The interest rate on this loan is 1M EIBOR + 3%. The entire balance is now classed as current. The loan is held by Doosan Babcock General Maint Services L.L.C, a subsidiary of the Company.
- RCF Facility with Standard Chartered Bank of £18.0m (2016: Nil). The interest rate on this facility is 3m LIBOR + 2.75%. This facility is due for renewal on 29 September 2018 and is classed as current. The RCF is held by the Doosan Babcock Limited.
- Overdraft facility with HSBC with a notional pooling agreement of £50m (2016: £40m) of which £7.9m was utilised at the 31 December 2017 (2016: £Nil) with an interest rate of Bank of England Base Rate + 2.75%

Intercompany Loans

Representing the Intercompany balance noted above are the following loans from subsidiaries of the Company:

- Loan with Doosan Babcock Limited for £368.6m (2016: £358.3m) This loan is for a period of 12 months from 5 December 2016 and will be renewed automatically for a further period of 12 months from the expiry date and any further expiry date thereof until either party gives at least 30 days written notice prior to such an expiry date to terminate this agreement. The interest rate on this loan is 12m LIBOR + 2%. The loan is classed as current.

- Loan with Doosan Babcock Limited for £58.6m (€62.0m) (2016: £42.9m (€50.0m)) which is denominated in Euros. This loan is renewed automatically every year for a period of 12 months until either party gives at least 30 days written notice prior to such an expiry date to terminate this agreement. The interest rate on this loan is 12m EURIBOR + 2.5%. This loan is classed as current.
- Loan with Doosan Skoda Power for £66.3m (CZK 1,835m) (2016: £40.7m (CZK 1,285m)) which is denominated in Czech Koruna. This loan is due to be repaid in 2019. The interest rate on this loan is 12m Pribor + 4%.
- Loan with Doosan Skoda Power for £9.3m (CZK 257m) (2016: £Nil) which is denominated in Czech Koruna. This loan is due to be repaid within 2018. The interest rate on this loan is 12m Pribor + 4.2%.

21. Provisions

	Other	Total non-current	Restructuring	Total current	Total
	£000	£000	£000	£000	£000
Group					
Balance at 1 January 2016	5,360	5,360	4,200	4,200	9,560
Income statement charge	372	372	14,272	14,272	14,644
Unwinding of discounting	2,100	2,100	—	—	2,100
Applied in the year	680	680	(4,200)	(4,200)	(3,520)
Balance at 31 December 2016	8,512	8,512	14,272	14,272	22,784
Income statement charge	1,447	1,447	—	—	1,447
Unwinding of discounting	2,300	2,300	—	—	2,300
Applied in the year	(3,302)	(3,302)	(11,249)	(11,249)	(14,551)
Balance at 31 December 2017	8,957	8,957	3,023	3,023	11,980

There are no provisions in the accounts of the Company.

The restructuring provision has been recognised by the Group in 2016 and utilised in 2017 to continue with its adaptation to the evolving energy industry and help ensure it is well placed to capitalise on future opportunities.

Other provisions include an amount of £9.0m (2016: £6.9m) relating to current and potential claims for which the Group may be liable together with related legal costs. These claims relate to employees who were working for the subsidiary Doosan Babcock in a period prior to 1972 who were exposed to asbestos and are now suffering illnesses as a result of this exposure. Due to the nature of these claims, it is not possible to predict precisely when these provisions will be utilised, but it is anticipated that, in the majority of cases, it would be in the medium-term.

22. Deferred tax

	Accelerated tax depreciation	Revaluation of financial assets	Retirement based obligations	Recognition of profit method	Provisions and other payables	Losses	Other	Total
	£000	£000	£000	£000	£000	£000	£000	£000
Group								
At 1 January 2016	931	1,030	11,205	4,424	4,451	3,813	(943)	24,911
Exchange differences	(1)	—	4	1	—	—	464	468
Credited/(charged) to income statement	(46)	126	(508)	(8,560)	364	3,397	(274)	(5,501)
(Charged) / credited to other comprehensive income	—	332	7,177	—	—	—	—	7,509
At 31 December 2016	884	1,488	17,878	(4,135)	4,815	7,210	(753)	27,387
Exchange differences	4	—	—	—	—	(4)	(215)	(215)
(Charged) / credited to income statement	143	—	(844)	2,419	(1,185)	1,784	(195)	2,122
(Charged) / credited to other comprehensive income	—	—	(2,734)	—	—	—	(169)	(2,903)
Reclassifications	—	—	—	—	—	—	(2,033)	(2,033)
(charged)/credited directly to equity	2,578	(1,674)	—	—	(3,596)	—	1,112	(1,580)
At 31 December 2017	3,609	(186)	14,300	(1,716)	34	8,990	(2,253)	22,778
At 31 December 2016								
Deferred tax assets	3,974	1,488	17,878	—	4,815	8,787	75	37,017
Deferred tax liabilities	(3,090)	—	—	(4,135)	—	(1,577)	(828)	(9,630)
	884	1,488	17,878	(4,135)	4,815	7,210	(753)	27,387
At 31 December 2017								
Deferred tax assets	4,395	—	14,300	—	34	9,909	58	28,696
Deferred tax liabilities	(786)	(186)	—	(1,716)	—	(919)	(2,311)	(5,918)
	3,609	(186)	14,300	(1,716)	34	8,990	(2,253)	22,778

Deferred tax assets have been recognised only to the extent that there are expected to be future taxable profits against which the asset will be utilised.

23. Called up share capital

	Ordinary Share capital	Class A shares	Class B shares	Class C shares	Total
	£000				
Subscribed capital – 31 December 2016	118,074	2,508,555	—	3,263,821	5,772,376
Subscribed capital – 31 December 2017	118,074	2,508,555	—	3,263,821	5,772,376

All ordinary shares issued are fully paid, ordinary shares carry no right to fixed income, but each share carries the right to one vote at general meetings of the Company. There is no specified authorised capital.

Each class of share have the same rights and obligations as set out above.

The par value of Class A and Class C shares is 25EUR. The Company was translated to be a GBP company in 2012 and as such the par value of each share became £20.46

All shares are classed as equity.

24. Perpetual bonds

On 3 December 2015 ("Issue Date") the Company issued bonds which are listed on the Singapore Exchange.

The bonds have been classed as an equity instrument. The details of this issue can be found below:

	Description
Purpose of issuance	To align gearing in order to establish optimum leverage
Guarantor	The Export-Import Bank of Korea
Bond term	Rolling 30-year term with automatic renewal feature if not redeemed at the option of the Company
Gross proceeds raised from issue	US$300.0m (£200.1m)
Issue costs	£8.1m
Gross proceeds less issue costs	£192.0m
Voting right	Bond holders have no voting rights
Coupon rate*	2.5% from Issue Date to 2 December 2018 ("First Call Date"). After 3 years the coupon rate steps up 130bps with this increase occurring every 3 years thereafter
Coupon Payment Date	Semi-annually on 3 June and 3 December
Redeemable right	The bonds can be redeemed at the choice of the Company after the third year and on any Coupon Payment Date thereafter. If the Company elects not to redeem the bonds at the end of the third year, each Holder shall be deemed to have exercised its right to require the Guarantor to purchase on the First Call Date (such date, the "Non-Call Put Date") all of the Securities held by such Holder at their principal amount plus any interest accrued up to (but excluding) the Non-Call Put Date and any outstanding deferred interest.

* Coupon rate payments are at the discretion of the Company. Under the terms of the bond issue if a payment is deferred the Company and its immediate parent, Doosan Heavy Industries & Construction Co., Ltd, are not allowed to pay dividends. Deferred interest is cumulative and compounding.

The bonds include no contractual obligation to:

- deliver cash or another financial asset to another entity, or
- to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the issuer.

Therefore the Company has classified the bond as equity.

25. Retained earnings

	Company	Group
	£000	£000
Balance at 1 January 2016	(60,138)	205,840
Profit /(loss) for the year	39,602	(5,766)
Actuarial loss on post-employment obligations	—	(47,028)
Deferred tax debit thereon	—	7,177
Transfer to statutory reserve	(1,980)	(1,980)
Perpetual bond dividend	(5,552)	(5,552)
Balance at 31 December 2016	(28,068)	152,691
Profit /(loss) for the year	(36,021)	(68,831)
Actuarial loss on post-employment obligations	—	17,022
Deferred tax debit thereon	—	(2,734)
Transfer to statutory reserve	—	—
Perpetual bond dividend	(5,735)	(5,735)
Balance at 31 December 2017	(69,824)	92,413

26. Other reserves

	Hedging reserve	Translation	Statutory reserve	Legal reserve	Revaluation reserve	Total
	£000	£000	£000	£000	£000	£000
Group						
At 1 January 2016	(4,359)	(89,469)	23,777	215	4,397	(65,439)
Cash flow hedges						
Fair value losses in the year	(1,861)	—	—	—	—	(1,861)
Tax on fair value losses	332	—	—	—	—	332
Currency translation difference						
Group (see note 11.3)	—	70,724	—	—	—	70,724
Transfer from retained earnings	—	—	—	1,980	—	1,980
At 31 December 2016	(5,888)	(18,745)	23,777	2,195	4,397	5,736
Cash flow hedges						
Fair value losses in the year	8,567	—	—	—	—	8,567
Tax on fair value losses	(1,575)	—	—	—	—	(1,575)
Currency translation difference						
Group (see note 11.3)	—	49,447	386	—	—	49,833
Revaluation of Land (see note 13.1)	—	—	—	—	771	771
At 31 December 2017	1,104	30,702	24,163	2,195	5,168	63,332

27. Notes to the statement of cash flows

Cash used in operations comprises:	Company 2017 £000	Company 2016 £000	Group 2017 £000	Group 2016 £000
Operating loss	(3,539)	(2,994)	(12,158)	(11,736)
Pension Payments	—	—	(8,174)	(3,273)
Amortisation of other intangible assets	—	—	9,544	9,716
Depreciation of property, plant and equipment	12	14	10,395	10,462
Share of loss in Doosan Power Systems (Scotland) Limited Partnership	—	30	—	—
Fair value of forward exchange contracts	—	—	3,891	(8,051)
Effect of translation on operating profit	—	—	1,528	(2,077)
Expenses not included in operating profit	—	—	(807)	(462)
Operating cash flow before movements in working capital	(3,527)	(2,950)	4,219	(5,421)
(Increase) / decrease in inventories	—	—	(18)	5,657
Decrease / (increase) in receivables	85	1,513	24,662	(41,362)
Increase / (decrease) in payables	(262)	1,354	(59,384)	4,209
Cash used in operations	(3,704)	(83)	(30,521)	(36,917)
Cash and cash equivalents comprise:				
Cash and bank balances	15,591	3,489	156,734	166,348
Bank overdrafts	—	—	(7,859)	—

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with original maturities of less than three months.

28. Capital commitments

The Group has the following capital commitments relating to primarily machines to be used in the business at the year-end:

	Company 2017 £000	Company 2016 7£000	Group 2017 £000	Group 2016 £000
Contracted but not provided	—	—	600	1,297

29. Contingent liabilities

In the ordinary course of business the Group has guarantees and counter indemnities in respect of bonds relating to performance under contracts. The Group also enters into forward exchange contracts to reduce its risk and exposure to fluctuations in exchange rates, which accrue in the ordinary course of business.

The Group assesses any legal claims on a regular basis. To the extent that a claim is payable and measurable a provision is reflected in the accounts accordingly.

30. Leasing

The Company has no material obligations under finance leases.

Operating leases

At the reporting date, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	Group	
	2017	2016
	£000	£000
Leases on land and buildings expiring:		
within one year	5,054	5,000
between one and five years	14,939	15,248
after five years	10,205	13,066
Leases on other assets expiring:		
within one year	1,654	2,097
between one and five years	1,617	1,708
after five years	—	—
Total	33,469	37,119

Future payments on operating leases relate primarily to motor vehicles and office premises. The leases have a variety of expiry dates mainly falling within three years for the smaller leases. The majority of the liability relates to office premises in Poland and the U.K. where the group is committed to leases beyond 2020. The majority of lease agreements are renewable at the end of the lease period at market rate. The lease expenditure charged to the income statement during the year is disclosed in note 8.

31. Construction projects in progress

	Company		Group	
	2017	2016	2017	2016
	£000	£000	£000	£000
Amounts due from contract customers in respect to project work				
– Billed	—	19	84,846	89,297
– Unbilled	—	—	105,238	128,142
Amounts due to contract customers in respect to project work	(3,610)	(2,125)	(23,734)	(43,554)
	(3,610)	(2,106)	166,350	173,885

The aggregate amount of costs incurred, plus recognised profits (less recognised losses) for all contracts in progress that had not reached practical completion at the reporting date was £2,106m (2016: £2,496m).

32. Subsequent events

On 12 February 2018 the Group gave a loan totalling €63.0m (£60.0m) to Doosan Heavy Industries & Construction Co., Ltd. On 6 April 2018 this loan was partially repaid by €19.0m (£16.9m) with the remaining balance of the loan amounting to €44.0m (£39.1m). As at the date the Annual Report and Financial Statements were approved the loan is due to be repaid by 31 December 2018.

On 10 April the Group bought ABSTB bonds in amount of ₩50.0B (£34.7m) which have a maturity date of 29 June 2018.

The Group reached a settlement on the Gardanne project with the return of the €18m (£16m) bond completed in April 2018 and a new bond being issued for €0.3m (£0.2m) valid until March 2019. A new contract of £2m is now in place to finalise a number of technical issues. All previous liquidated damages potential liabilities associated with the original contract have now been removed and are no longer a risk to the business.

A restructuring programme in Doosan Babcock (See Directors Report) is underway with overhead savings to be realised from Q2 and anticipated costs of £7.5m.

33. Related party transactions

33.1. Group

During the year the Group made purchases incurred costs and received income from other members of the Doosan Group including its parent company Doosan Heavy Industries & Construction Co., Ltd., which can be summarised as follows:

	Doosan Information and Communications Europe Limited		Doosan Power Systems India Private Limited		Doosan Corporation Information and Communication		Doosan Fuel Cell America Inc		Doosan Heavy Industries and Construction Co. Ltd	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	£000	£000	£000	£000	£000	£000	£000	£000	£000	£000
Receivable as at 31 December	—	—	1,145	1,286	—	—	—	—	19,937	21,225
Payable as at 31 December	4,222	2,711	—	—	336	183	—	—	7,604	5,811
Closing accruals/advances	304	510	—	—	—	—	—	—	17,953	20,076
Purchases	11,655	16,800	30	94	3,829	280	1,667	—	544	6,657
Income	1,071	1,451	926	146	—	—	60	—	28,882	33,533

None of the amounts included within receivables above have been provided against.

During the year the Group made payments to the Doosan Babcock Energy Pension Trustees Ltd to the value of £8,958,000 (2016: £7,685,000).

During the year the Group received services from another subsidiary of Doosan Heavy Industries & Construction Co., Ltd, Doosan IMGB S.A. to the value of £804,000 (2016: £272,000), and provided services to the value of £114,000 (2016: £Nil). There was £nil payable or receivable at the year-end (2016: £nil).

33.2. Company

During the year, the Company incurred costs and received income from the companies listed below, all of which are subsidiaries of the Company.

Receivables and payables

	Company	
	2017	2016
	£000	£000
Amounts due from Doosan Power Systems Europe GmbH	99,302	73,309
Amounts due from Doosan Skoda s.r.o.	651	—
Amounts due from Doosan Lentjes GmbH	1,699	—
Amounts due from Doosan Heavy Industries and Construction Co. Ltd	101	101
Total Receivables	101,753	73,410
Amounts due to Doosan Babcock Limited	430,918	403,729
Amounts due to Doosan Power Systems (Scotland) Limited Partnership	696	1,951
Amounts due to Doosan Skoda s.r.o.	75,623	41,182
Amounts due to Doosan Babcock Energy Polska Sp. z o.o.	204	171
Total Payables	507,441	447,033

Income and costs

	Company	
	2017	2016
	£000	£000
Interest received from Doosan Power Systems Europe GmbH	1,157	1,020
Income from Doosan Skoda s.r.o.	1,285	1,026
Net income from Doosan Power Systems Americas LLC	—	83
Share of Profit in Doosan Power Systems (Scotland) Limited Partnership	1,256	—
Total Income	3,698	2,129
Share of loss in Doosan Power Systems (Scotland) Limited Partnership	—	30
Interest paid to Doosan Babcock Limited	10,594	10,343
Interest paid to Doosan Power Systems Holdings	—	7,410
Amounts invoiced by Doosan Babcock Limited	5,134	—
Professional fees paid by Doosan Babcock Limited on behalf of the Company	1,518	5,861
Amounts invoiced by Doosan Skoda s.r.o.	—	1,420
Amounts invoiced by Doosan Babcock Energy Polska Sp. z o.o.	474	—
Total costs	17,720	25,064

34. Ultimate parent company and controlling party

The Company is a subsidiary undertaking of Doosan Corporation Co., Ltd registered in the Republic of Korea which the Directors consider to be the Company's ultimate parent company. This is the largest Group in which the results of the Company are consolidated. The smallest such Group is that headed by Doosan Heavy Industries & Construction Co., Ltd which is registered in the Republic of Korea. Doosan Heavy Industries & Construction Co. is the parent of the Company.

The consolidated financial statements of Doosan Corporation Co., Ltd are available to the public and may be obtained from Euljiro 6-ga, Jung-gu, Seoul, the Republic of Korea, 100-730.

The consolidated financial statements of Doosan Heavy Industries & Construction Co., Ltd are available to the public and may be obtained from 555, Gwigok-dong, Changwon, Gyeongsangnam-do 641-792, the Republic of Korea.

Independent Auditors' Review Report

The Board of Directors and Stockholder
The Export-Import Bank of Korea:

Reviewed Financial Statements

We have reviewed the accompanying condensed separate interim financial statements of The Export-Import Bank of Korea (the "Bank"), which comprise the condensed separate statement of financial position as of June 30, 2018, the condensed separate statements of comprehensive income, changes in equity and cash flows for the six-month period ended June 30, 2018 and 2017, and notes comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility

Management is responsible for the preparation and fair presentation of these condensed separate interim financial statements in accordance with Korean International Financial Reporting Standards ("K-IFRS") 1034 'Interim Financial Reporting', 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.

Auditors' Review Responsibility

Our responsibility is to issue a report on these condensed separate interim financial statements based on our reviews.

We conducted our reviews in accordance with the Review Standards for Quarterly and Semiannual Financial Statements 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.

Review conclusion

Based on our reviews, nothing has come to our attention that causes us to believe that the accompanying condensed separate interim financial statements referred to above are not prepared, in all material respects, in accordance with K-IFRS 1034 'Interim Financial Reporting'.

Other matters

The procedures and practices utilized in the Republic of Korea to review such condensed interim financial statements may differ from those generally accepted and applied in other countries.

The separate statement of financial position of the Bank as of December 31, 2017, and the related separate statements of comprehensive income, changes in equity and cash flows for the year then ended, which are not accompanying this report, were audited by us in accordance with Korean Standards on Auditing and our report thereon, dated March 30, 2018, expressed an unqualified opinion. The accompanying separate statement of financial position of the Bank as of December 31, 2017 presented for comparative purposes, is consistent, in all material respects, with the audited separate financial statements from which it has been derived.

/s/ KPMG Samjong Accounting Corp.
KPMG Samjong Accounting Corp.
Seoul, Korea
September 20, 2018

This report is effective as of September 20, 2018, 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 condensed separate interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that the above review report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

THE EXPORT-IMPORT BANK OF KOREA
SEPARATE INTERIM STATEMENTS OF FINANCIAL POSITION
AS OF JUNE 30, 2018 AND DECEMBER 31, 2017

	Korean won	
	June 30, 2018(*1)	December 31, 2017
	(In millions)	
ASSETS:		
Cash and due from financial institutions (Notes 4, 5 and 7)	₩ 4,864,717	₩ 2,091,920
Financial assets at fair value through profit or loss ("FVTPL") (Notes 4, 5, 8 and 20)	1,930,661	1,616,973
Hedging derivative assets (Notes 4, 5 and 20)	63,268	228,121
Loans at amortized cost (Notes 4, 5, 10 and 37)	70,043,253	68,223,320
Financial investments (Notes 4, 5 and 9)	8,342,161	6,781,955
Investments in associates and subsidiaries (Note 11)	2,642,502	2,598,607
Tangible assets, net (Note 12)	265,043	268,465
Intangible assets, net (Note 13)	42,120	47,622
Deferred tax assets (Note 34)	943,193	1,126,199
Retirement benefit assets, net (Note 18)	7,672	12,227
Other assets (Notes 4, 5, 14 and 37)	1,284,101	950,531
	₩90,428,691	₩83,945,940
LIABILITIES AND STOCKHOLDERS' EQUITY		
LIABILITIES:		
Financial liabilities at FVTPL (Notes 4, 5 and 20)	₩ 1,012,308	₩ 911,778
Hedging derivative liabilities (Notes 4, 5 and 20)	1,775,419	1,058,196
Borrowings (Notes 4, 5 and 15)	6,601,474	6,013,457
Debentures (Notes 4, 5 and 16)	64,308,624	60,685,098
Provisions (Note 17)	568,499	675,118
Other liabilities (Notes 4, 5, 19 and 37)	3,031,865	2,088,950
	77,298,189	71,432,597
STOCKHOLDERS' EQUITY:		
Capital stock (Note 21)	11,814,963	11,814,963
Additional paid-in capital	—	—
Capital adjustments	(129,339)	(129,339)
Other components of equity (Notes 20 and 22)	366,369	119,739
Retained earnings (Note 23) (Regulatory reserve for loan losses as of June 30, 2018 and December 31, 2017: ₩302,248 million and ₩206,330 million)	1,078,509	707,980
	13,130,502	12,513,343
	₩90,428,691	₩83,945,940

(*1) The separate interim statement of financial position as of June 30, 2018 was prepared in accordance with K- IFRS No.1109. However, the comparative separate statement of financial position as of December 31,, 2017 was not retrospectively restated.

See accompanying notes to separate interim financial statements.

THE EXPORT-IMPORT BANK OF KOREA
SEPARATE INTERIM STATEMENTS OF COMPREHENSIVE INCOME
FOR THE SIX MONTHS ENDED JUNE 30, 2018 AND 2017

	Korean won	
	Six months ended June 30, 2018(*1)	Six months ended June 30, 2017
	(In millions)	
OPERATING INCOME:		
Net interest income (Notes 24 and 37):		
Interest income	₩ 1,335,892	₩1,302,693
Interest expenses	(894,190)	(784,940)
	441,702	517,753
Net commission income (Notes 25 and 37):		
Commission income	154,765	205,492
Commission expenses	(4,135)	(2,749)
	150,630	202,743
Dividend income (Note 26)	35,390	33,184
Loss on financial assets at FVTPL (Note 27)	(97,488)	138,818
Gain (loss) on hedging derivative assets (Notes 20 and 28)	(1,005,560)	768,671
Gain (loss) on financial investments (Note 29)	(1,463)	15,539
Gain (loss) on foreign exchange transaction	495,145	(702,210)
Other net operating income (loss) (Note 30)	672,105	(172,509)
Impairment (reversal) on credit (Note 31)	121,193	(121,691)
General and administrative expenses (Note 32)	(102,608)	(100,847)
Total operating income	709,046	579,451
NON-OPERATING INCOME (EXPENSES) (Note 33):		
Net gain on investments in associates and subsidiaries	4,577	9,670
Net other non-operating income (expenses)	9,291	(6,882)
	13,868	2,788
INCOME BEFORE INCOME TAX	722,914	582,239
INCOME TAX EXPENSES (Note 34)	(164,026)	(136,899)
NET INCOME	558,888	445,340
(Adjusted income after reserve for bad loans for the six months ended June 30, 2018 and 2017: ₩546,466 million and ₩221,137 million) (Note 23)		
OTHER COMPREHENSIVE INCOME (LOSS) FOR THE PERIOD (Note 22)		
Items not reclassified subsequently to profit or loss:	—	—
Loss on disposal of financial assets at FVOCI	(17,648)	—
Income tax effect	4,271	—
Items that are or may be reclassified subsequently to profit or loss:		
Gain on valuation on available-for-sale ("AFS") securities	—	(129,103)
Gain on valuation of financial assets at FVOCI	648,043	—
Cash flow hedging gains or losses	(1,702)	(1,904)
Income tax effect	(156,500)	10,168
	476,464	(120,839)
TOTAL COMPREHENSIVE INCOME	₩ 1,035,352	₩ 324,501

(*1) The separate interim statement of comprehensive income for the six-month period ended June 30, 2018 was prepared in accordance with K- IFRS No.1109. However, the comparative separate interim statement of comprehensive income for the six-month period ended June 30, 2017 was not retrospectively restated.

See accompanying notes to separate interim financial statements.

THE EXPORT-IMPORT BANK OF KOREA
SEPARATE INTERIM STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE SIX MONTHS ENDED JUNE 30, 2018 AND 2017

			Other components of equity					
	Capital stock	Additional paid-in capital	Valuation on FVOCI financial instruments	Valuation of cash-flow hedge	Remeasurement, net of defined benefit assets	Gain or loss on disposal of FVOCI financial instruments	Retained earnings	Total
				(Korean won in millions)				
January 1, 2017	₩10,398,055	₩ 6,723	₩ 259,564	₩ 854	₩19,599	₩ —	₩ 535,186	₩11,219,981
Paid-in capital increase	1,416,908	(130,455)	—	—		—	—	1,286,453
Net income	—	—	—	—	—	—	445,340	445,340
Other comprehensive income:								(120,839)
Loss on valuation of AFS securities, net of tax	—	—	(119,396)	—	—	—	—	(119,396)
Loss on valuation of cash flow hedge, net of tax	—	—	—	(1,443)	—	—	—	(1,443)
June 30, 2017	₩11,814,963	₩(123,732)	₩ 140,168	₩ (589)	₩19,599	₩ —	₩ 980,526	₩12,830,935
January 1, 2018	₩11,814,963	₩(129,339)	₩ 101,985	₩ 586	₩17,168	₩ —	₩ 707,980	₩ 2,513,343
Adjustments on initial application of K-IFRS No.1109	—	—	(216,017)	—	—	(13,817)	(128,763)	(358,597)
January 1, 2018 (restated)	11,814,963	(129,339)	(114,032)	586	17,168	(13,817)	579,217	12,154,746
Payment of dividends	—	—	—	—	—	—	(59,596)	(59,596)
Net income	—	—	—	—	—	—	558,888	558,888
Other comprehensive income:								476,464
Gain on valuation of FVOCI financial instruments, net of tax	—	—	491,217	—	—	—	—	491,217
Loss on valuation of cash flow hedge, net of tax	—	—	—	(1,376)	—	—	—	(1,376)
Loss on disposal of FVOCI financial instruments, net of tax	—	—	—	—	—	(13,377)	—	(13,377)
June 30, 2018(*1)	₩11,814,963	₩(129,339)	₩ 377,185	₩ (790)	₩17,168	₩(27,194)	₩1,078,509	₩13,130,502

(*1) The separate interim statement of changes in equity for the six-month period ended June 30, 2018 was prepared in accordance with K- IFRS No.1109. However, the comparative separate interim statement of changes in equity for the six-month period ended June 30, 2017 was not retrospectively restated.

See accompanying notes to separate interim financial statements.

THE EXPORT-IMPORT BANK OF KOREA
SEPARATE INTERIM STATEMENTS OF CASH FLOWS
FOR THE SIX MONTHS ENDED JUNE 30, 2018 AND 2017

	Korean won	
	Six months June 30, 2018(*1)	Six months June 30, 2017
	(In millions)	
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	₩ 558,888	₩ 445,340
Adjustments to reconcile net income to net cash used in operating activities:		
Income tax expense	164,026	136,899
Interest income	(1,335,892)	(1,302,693)
Interest expenses	894,190	784,940
Dividend income	(35,390)	(33,184)
Dividend received from subsidiaries and associates	(4,577)	(9,905)
Loss on financial assets at FVTPL	2,722	—
Loss on financial assets at FVOCI	1,722	—
Loss on financial assets held for trading	—	336
Loss on AFS financial assets	—	3,390
Transfer to derivatives' credit risk provision	49,545	28,731
Loss on redemption of debentures	—	1,680
Loss on foreign exchange transactions	490,760	928,824
Impairment loss on credit	120,903	121,691
Impairment loss of investments in subsidiaries and associates	—	235
Loss on fair value hedged items	33,767	227,884
Depreciation and amortization	10,766	8,034
Loss on disposals of tangible, intangible and other assets	1	20
Loss on valuation of derivative assets	1,675,519	537,015
Retirement benefits	4,416	4,488
Gain on financial assets at FVTPL	(13,844)	—
Gain on financial assets at FVOCI	(211)	—
Gain on financial assets held for trading	—	(1,876)
Gain on AFS financial assets	—	(18,929)
Reversal of derivatives' credit risk provision	(40,533)	(5,806)
Gain on foreign exchange transactions	(983,186)	(198,244)
Impairment reversal on credit	(121,193)	—
Gain on fair value hedged items	(717,545)	(82,136)
Gain on valuation of derivative assets	(523,640)	(1,345,693)
Gain on disposals of tangible assets, intangible assets and other assets	(101)	(22)
Changes in operating assets and liabilities:		
Due from financial institutions	(1,256,633)	930,596
Financial assets at FVTPL	540,681	675,633
Hedging derivative net assets	(864,781)	(241,182)
Loans at amortized cost	(506,497)	(661,559)
Other assets	(304,171)	32,063
Provisions	(20,081)	(957,692)
Payment of retirement benefits	139	903
Other liabilities	670,946	137,333
Other provisions	—	(380)
Payment of income tax	(18,306)	(121,838)
Interest received	1,218,802	1,145,299
Interest paid	(764,694)	(701,737)
Dividend received	(38,575)	43,089
Net cash provided by (used in) operating activities	(1,115,858)	511,547

(Continued)

THE EXPORT-IMPORT BANK OF KOREA
SEPARATE INTERIM STATEMENTS OF CASH FLOWS (CONTINUED)
FOR THE SIX MONTHS ENDED JUNE 30, 2018 AND 2017

	Korean won	
	Six months June 30, 2018(*1)	Six months June 30, 2017
	(In millions)	
CASH FLOWS FROM INVESTING ACTIVITIES:		
Disposal of AFS and HTM financial assets	₩ —	₩ 692,007
Disposal of investment instruments	101,809	—
Disposals of investments in associates	475	—
Disposals of tangible assets	1	22
Disposals of intangible assets	380	120
Acquisitions of AFS and HTM financial assets	—	(415,012)
Acquisitions of investment instruments	(240,362)	—
Investments in subsidiaries and associates	(44,370)	(346,422)
Acquisitions of tangible assets	(906)	(960)
Acquisitions of intangible assets	(1,217)	(9,573)
Net cash used in investing activities	(184,190)	(79,818)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Increase in call money	68	710,000
Proceeds from borrowings	3,290,567	2,726,364
Proceeds from debentures	11,571,264	11,643,149
Increase in deposits	2	—
Repayment of borrowings	(3,010,978)	(4,300,299)
Repayment of debentures	(8,951,815)	(11,420,822)
Decrease in deposits	(4)	—
Expense related to issuance of capital	—	(1,203)
Payment of dividends	(59,596)	—
Net cash provided by (used in) financing activities	2,839,508	(642,811)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	1,499,460	(211,082)
CASH AND CASH EQUIVALENTS, BEGINNING OF THE PERIOD	815,994	1,354,694
EFFECTS OF FOREIGN EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS IN FOREIGN CURRENCIES	(76,231)	(32,656)
CASH AND CASH EQUIVALENTS, END OF THE PERIOD (Note 7, 35)	₩ 2,239,223	₩ 1,110,956

(*1) The separate interim statement of cash flows for the six-month period ended June 30, 2018 was prepared in accordance with K- IFRS No.1109. However, the comparative separate interim statement of cash flows for the six-month period ended June 30, 2017 was not retrospectively restated.

See accompanying notes to separate interim financial statements.

1. GENERAL:

(1) Summary of The Export-Import Bank of Korea

The Export-Import Bank of Korea (the "Bank" or the "Company") was established in 1976 as a special financial institution under The Export-Import Bank of Korea Act (the "EXIM Bank Act") to grant financial facilities for overseas trade (i.e., export and import), investments and resources development activities. As of June 30, 2018, the Bank operates 10 domestic branches, three domestic offices, four overseas subsidiaries and 24 overseas offices.

The Bank's authorized capital is ₩15,000,000 million, and through numerous capital increases since the establishment, its paid-in capital is ₩11,814,963 million as of June 30, 2018. The Government of the Republic of Korea (the "Government"), the Bank of Korea ("BOK"), and the Korea Development Bank hold 66.27%, 9.86%, and 23.87%, respectively, of the ownership of the Bank as of June 30, 2018.

The Bank, as a trustee of the Government, has managed the Economic Development Cooperation Fund ("EDCF") since June 1987 and the Inter-Korean Cooperation Fund ("IKCF") since March 1991. These funds are accounted for separately and are not included in the Bank's separate interim financial statements. The Bank receives fees from the Government for the trustee services.

(2) Summary of subsidiaries and associates

1) Subsidiaries of the Bank as of June 30, 2018, and December 31,2017, are as follows (Korean won in millions):

(June 30, 2018)

Subsidiaries	Location	Capital stock		Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
KEXIM Bank UK Limited	United Kingdom	GBP	20 mil.	Finance	20,000,000	100.00	Jun. 30, 2018
KEXIM Vietnam Leasing Co.(*1)	Vietnam	USD	13 mil.	Finance	—	100.00	Jun. 30, 2018
PT.KOEXIM Mandiri Finance	Indonesia	IDR	52,000 mil.	Finance	442	85.00	Jun. 30, 2018
KEXIM Asia Limited	Hong Kong	USD	30 mil.	Finance	30,000,000	100.00	Jun. 30, 2018

(*1) This entity does not issue share certificates.

(December 31, 2017)

Subsidiaries	Location	Capital stock		Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
KEXIM Bank UK Limited	United Kingdom	GBP	20 mil.	Finance	20,000,000	100.00	Dec. 31, 2017
KEXIM Vietnam Leasing Co.(*1)	Vietnam	USD	13 mil.	Finance	—	100.00	Dec. 31, 2017
PT.KOEXIM Mandiri Finance	Indonesia	IDR	52,000 mil.	Finance	442	85.00	Dec. 31, 2017
KEXIM Asia Limited	Hong Kong	USD	30 mil.	Finance	30,000,000	100.00	Dec. 31, 2017

(*1) This entity does not issue share certificates.

2) Associates of the Bank as of June 30, 2018, and December 31, 2017, are as follows :

(June 30, 2018)

Associates	Location	Capital stock	Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
Korea Asset Management Corporation	Korea	KRW 860,000 mil.	Financial service	44,482,396	25.86	Jun. 30, 2018
Credit Guarantee and Investment Fund	Philippines	USD 855 mil.	Financial service	100,000,000	11.70	Mar. 31, 2018
Korea Marine Guarantee Incorporated Company	Korea	KRW 322,357 mil.	Financial service	26,999,999	41.88	Jun. 30, 2018
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Korea	KRW1,319,693 mil.	Shipbuilding	113,075,200	81.25	Jun. 30, 2018
DAESUN Shipbuilding & Engineering Co., Ltd.	Korea	KRW 6,262 mil.	Shipbuilding	1,040,000	83.03	Jun. 30, 2018
KTB Newlake Global Healthcare PEF	Korea	KRW 28,280 mil.	Financial service	7,070,000,000	25.00	Jun. 30, 2018
KBS-KDB Private Equity Fund	Korea	KRW 18,817 mil.	Financial service	3,761,875,000	19.99	Jun. 30, 2018
Korea Shipping and Maritime Transportation	Korea	KRW 25,000 mil.	Financial service	2,000,000	40.00	Jun. 30, 2018
Korea Aerospace Industries. Ltd.	Korea	KRW 487,376 mil.	Manufacturing	25,745,964	26.41	Jun. 30, 2018

(December 31, 2017)

Associates	Location	Capital stock	Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
Korea Asset Management Corporation	Korea	KRW 860,000 mil.	Financial service	44,482,396	25.86	Dec. 31, 2017
Credit Guarantee and Investment Fund	Philippines	USD 700 mil.	Financial service	100,000,000	14.29	Sep. 30, 2017
Korea Marine Guarantee Incorporated Company	Korea	KRW 322,357 mil.	Financial service	26,999,999	41.88	Dec. 31, 2017
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Korea	KRW1,319,693 mil.	Shipbuilding	93,294,100	81.25	Sep. 30, 2017
DAESUN Shipbuilding & Engineering Co., Ltd.	Korea	KRW 7,730 mil.	Shipbuilding	1,040,000	67.30	Sep. 30, 2017
KTB Newlake Global Healthcare PEF	Korea	KRW 10,280 mil.	Financial service	257,000,000	25.00	Dec. 31, 2017
KBS-KDB Private Equity Fund	Korea	KRW 11,361 mil.	Financial service	2,366,875,000	20.83	Dec. 31, 2017
Korea Shipping and Maritime Transportation	Korea	KRW 904,884 mil.	Financial service	1,810,000	40.00	Dec. 31, 2017
Korea Aerospace Industries. Ltd.	Korea	KRW 487,376 mil.	Manufacturing	25,745,964	26.41	Dec. 31, 2017

2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES:

(1) Basis of condensed separate financial statement preparation

These condensed separate interim financial statements were prepared in accordance with K-IFRS No. 1034, 'Interim Financial Reporting' as part of the period covered by the Bank's K-IFRS annual financial statements. These condensed separate interim financial statements do not include all of the disclosures required for full annual financial statements.

These financial statements are separate financial statements prepared in accordance with K-IFRS No.1027, 'Separate Financial Statements' presented by a parent, an investor with joint control of, or significant influence over, an investee, in which the investments are accounted for at cost.

The Bank's accounting policies applied for the accompanying condensed separate interim financial statements are the same as the policies applied for the preparation of separate financial statements as of and for the year ended December 31, 2017, except for K-IFRS No. 1109 'Financial Instruments' and K-IFRS No. 1115 'Revenue from contracts with customers', which were initially applied from January 1, 2018.

(2) K-IFRS No. 1109 'Financial Instruments'

☐ Classification and measurement of financial assets

Applying K-IFRS No.1109, the Bank classifies financial assets to be measured at amortized cost, fair value through other comprehensive income ("FVOCI") or fair value through profit or loss ("FVPL") on the basis of the Bank's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. If a hybrid contract contains a host that is a financial asset, the embedded derivatives shall not be separated from the host, and the hybrid contract as a whole shall be classified as a financial asset.

Business model	Contractual cash flows that are solely payments of principal and interests	All other cases
For collecting contractual cash flows	At amortized cost(*1)	At FVPL(*2)
For both collecting contractual cash flows and selling financial assets	At FVOCI(*1)	
For trading, and others	At FVPL	

(*1) The Bank may irrevocably designate a financial asset as at FVPL to eliminate or significantly reduce an accounting mismatch.
(*2) The Bank may irrevocably designate equity instruments that is not held for trading as at FVOCI.

As there are more stringent requirements for a financial asset to be classified as measured at amortized costs or FVOCI under K-IFRS No.1109 compared to the existing guidance in K-IFRS No.1039, the adoption of K-IFRS No.1109 would potentially increase the portion of financial assets that are measured at FVPL, which would also increase the volatility in the Bank's profit or loss.

☐ Classification and measurement of financial liabilities

According to K-IFRS No.1109, changes in fair value of the financial liability designated as at FVPL that is attributable to changes in the credit risk shall be presented as other comprehensive income, not recognized in profit or loss. Amounts presented in other comprehensive income shall not be subsequently transferred to profit or loss. However, if recognizing the changes in fair value as other comprehensive income creates or enlarges accounting mismatch, the amounts shall be recognized as profit or loss.

☐ Impairment: Financial assets and contract assets

In accordance with the existing standard K-IFRS No.1039, impairment is recognized only if evidence of impairment based on 'incurred loss model' is identified. In accordance with K-IFRS No.1109, the new accounting standard, impairment shall be recognized based on 'expected credit loss impairment model' for debt instruments, lease receivables, contract assets, loan commitments and financial guarantee contracts, which are measured at amortized cost or FVOCI.

According to K-IFRS No.1109, a loss allowance shall be measured at the amounts of 12 month expected credit losses or lifetime expected credit losses, by the three stages in the table below depending on the extent of significant increase in credit risk since initial recognition. Hence, an early recognition of credit risk may be available compared to the 'incurred loss model' in the existing standard K-IFRS No.1039.

Stages(*1)		Loss allowance
Stage 1	No significant increase in credit risk since initial recognition(*2)	12-Month Expected Credit Losses: the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on financial instruments that are possible within 12 months after the reporting date
Stage 2	Significant increase in credit risk since initial recognition	
Stage 3	Objective evidence of credit risk management	Lifetime Expected Credit Losses: the expected credit losses that result from all possible default events over the expected life of a financial instrument

(*1) In cases of trade receivable or contract assets in scope of K-IFRS No.1115 *'Revenue from Contracts with Customers'*, if there is no significant financing component in contracts with customers, loss allowance for such assets shall be measured at lifetime expected credit losses. If a significant financing component exists, entities can elect to measure the loss allowance for trade receivable or contract assets at lifetime expected credit losses. In cases of lease receivable, entities can elect to measure the loss allowance at lifetime expected credit losses as well.

(*2) If financial instruments have low credit risk at the end of the reporting period, it is also considered that credit risk of such instruments has not increased significantly since initial recognition.

According to K-IFRS No.1109, the Bank only recognizes the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for financial assets impaired at its initial recognition.

(3) K-IFRS No. 1115 'Revenue from contracts with customers'

The core principle under K-IFRS No.1115 is that an entity should 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. The amendments introduces a five-step approach to revenue recognition and measurement: 1) Identify the contract with a customer, 2) Identify the performance obligations in the contract, 3) Determine the transaction price, 4) Allocate the transaction price to the performance obligations in the contract and, 5) Recognize revenue when (or as) the entity satisfies a performance obligation. This standard has superseded K-IFRS No.1011, '*Construction Contracts*', K-IFRS No.1018, '*Revenue*', K-IFRS No.2113, '*Customer Loyalty Programmes*', K-IFRS No.2115, '*Agreements for the Construction of Real Estate*', K-IFRS No.2118, '*Transfers of Assets from Customers*', and K-IFRS No.2031, '*Revenue-Barter Transactions Involving Advertising Services*'. The amendments are effective for annual periods beginning on or after January 1, 2018.

The Bank does not expect the application of K-IFRS No.1115 will have a significant impact on the separate financial statements.

(4) Functional Currency

Items included in the separate financial statements of each entity in the Bank are measured using the currency of the primary economic environment in which the entity operates (the functional currency).

3. SIGNIFICANT ESTIMATES AND JUDGMENTS:

The preparation of separate financial statements requires the application of accounting policies, especially certain critical accounting estimates and assumptions that may have a significant impact on assets (liabilities) and income (expenses). The management's estimate of outcome may differ from an actual outcome if the management's estimate and assumption based on its best judgment at the reporting date are different from the actual environment.

Estimates and assumptions are continually evaluated and the 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, or the period of the change and future periods, if the change affects both. Significant judgments are the same as those applied in preparation of the annual separate financial statements for the year ended December 31, 2017, except for the matters described below.

4. RISK MANAGEMENT:

4-1. Summary

(1) Overview of Risk Management Policy

The financial risks that the Bank is exposed to are credit risk, market risk, liquidity risk, operational risk, interest risk, credit concentration risk, strategy/reputational risk, outsourcing risk, settlement risk and others. Credit risk, market risk, liquidity risk, and operational risk have been recognized as the Bank's key risks.

The Bank's risk management system focuses on increasing transparency, developing risk management environment and preemptive response to risks due to rapid changes in financial environment to support the Bank's long-term strategy and business decision efficiently.

The note regarding financial risk management provides information about the risks that the Bank is exposed to, the objective, policies and process for managing the risk, the methods used to measure the risk and capital adequacy. Additional quantitative information is disclosed throughout the separate financial statements.

(2) Risk Management Group

1) Risk Management Committee

The Risk Management Committee establishes risk management strategies in accordance with the directives of the board of directors and determines the Bank's target risk appetite, approves significant risk matters and reviews the level of risks that the Bank is exposed to and the appropriateness of the Bank's risk management operations as an ultimate decision-making authority.

2) Risk Management Council

The Risk Management Council is a consultative group that reviews and makes decisions on matters delegated by the Risk Management Committee and discusses the detailed issues relating to the Bank's risk management.

3) Risk Management Practices Committee

The Risk Management Practices Committee assists the Risk Management Committee and the Risk Management Council. It performs practical work process relating to risk management plan, including targeted Bank for International Settlements ("BIS") ratio, risk management strategy, risk measurement, risk analysis, economic capital limit and others.

4-2. Credit risk

(1) Overview of Credit Risk

Credit risk is the risk of possible losses in an asset portfolio in the events of counterparty's default, breach of contract and deterioration in the credit quality of the counterparty. For the risk management reporting purposes, the individual borrower's default risk, country risk, specific risks and other credit risk exposure components are considered as a whole.

(2) Credit Risk Management

The Bank controls the credit concentration risk exposure by applying and managing total exposure limits to prevent the excessive risk concentration to specific industry and specific borrowers. The Bank maintains allowances for loan losses associated with credit risk on loans and receivables to manage its credit risk.

(3) Maximum exposure to credit risk

The Bank's maximum exposure of financial instruments to credit risk as of June 30, 2018, and December 31, 2017, is as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Cash and due from financial institutions	₩ 4,864,717	₩ 2,091,920
Financial assets at FVTPL	888,214	891,360
Hedging derivative assets	63,268	228,121
Loans at amortized cost(*1)	72,726,714	71,486,133
Financial investments	1,117,799	1,000,995
Other financial assets	1,435,277	1,102,062
Acceptances and guarantee contracts	41,427,133	42,808,774
Commitments(*2)	16,355,510	19,737,788
	₩138,878,632	₩139,347,153

(*1) Loans at amortized cost exclude loans valuation adjustment related to fair value hedging, allowances for loan losses.
(*2) Commitments exclude commitments on purchase of beneficiary certificates which are included in other commitments in Note 36.

(4) Credit risk of loans

The Bank maintains allowances for loan losses associated with credit risk on loans to manage its credit risk. The Bank writes off on non-profitable loans, non-recoverable loans, loans classified as estimated loss by asset quality category, loans requested to be written off by Financial Supervisory Service ("FSS") and others upon approval of Loan Management Committee.

Loans are categorized as follows (Korean won in millions):

(June 30, 2018)

	12 month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Collective assessment:				
Best	₩16,377,697	₩ 8,990	₩ 5,309	₩16,391,996
Outstanding	24,554,525	—	42,767	24,597,292
Good	25,449,485	1,800,051	29,742	27,279,278
Below normal	—	502,900	69,902	572,803
Subtotal	66,381,707	2,311,941	147,720	68,841,369
Individual assessment:				
Best	—	—	896,045	896,045
Outstanding	—	—	—	—
Good	—	45,407	69,887	115,294
Below normal	—	711,908	2,162,098	2,874,006
Subtotal	—	757,315	3,128,030	3,885,345
Total	₩66,381,707	₩3,069,256	₩3,275,750	₩72,726,714

(December 31, 2017)

	Individual assessment	Collective assessment	Total	Ratio (%)
Loans:				
Normal				
Not past due	₩ 2,123,302	₩66,023,655	₩68,146,957	94.79
Past due	—	30	30	0.01
Impaired	3,610,399	126,860	3,737,259	5.20
Subtotal	5,733,701	66,150,545	71,884,246	100.00
Net deferred origination fees and costs:				
Normal				
Not past due	(37)	(396,944)	(396,981)	99.72
Past due	—	—	—	—
Impaired	(1,138)	6	(1,132)	0.28
Subtotal	(1,175)	(396,938)	(398,113)	100.00
Carrying amounts before deducting allowances:				
Normal				
Not past due	2,123,265	65,626,711	67,749,976	94.77
Past due	—	30	30	0.01
Impaired	3,609,261	126,866	3,736,127	5.22
Subtotal	5,732,526	65,753,607	71,486,133	100.00
Allowances:				
Normal				
Not past due	(368,644)	(254,029)	(622,673)	18.94
Percentage (%)	17.36	0.39	0.92	

	Individual assessment	Collective assessment	Total	Ratio (%)
Past due	—	(22)	(22)	0.01
Percentage (%)	—	73.33	73.33	
Impaired	(2,601,057)	(63,243)	(2,664,300)	81.05
Percentage (%)	72.07	49.85	71.31	
Subtotal	(2,969,701)	(317,294)	(3,286,995))	100.00
Percentage (%)	51.80	0.48	4.60	
Carrying amounts:				
Normal				
Not past due	1,754,621	65,372,682	67,127,303	98.43
Past due	—	8	8	0.01
Impaired	1,008,204	63,623	1,071,827	1.56
Total	₩ 2,762,825	₩65,436,313	₩68,199,138	100.00

The above carrying amounts exclude loan valuation adjustment related to fair value hedging amounting to ₩17,139 million and ₩24,182 million as of June 30, 2018, and December 31, 2017, respectively.

1) Credit quality of loans that are neither past due nor impaired

Credit quality of loans that are neither past due nor impaired as of December 31, 2017, are as follows (Korean won in millions):

(December 31, 2017)

	Loans							
Criteria	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees and costs	Allowances	Carrying amount
Best	₩ 2,802,177	₩ 9,769,413	₩2,121,958	₩14,693,548	21.56	₩ (62,402)	₩ (9,752)	₩14,621,394
Outstanding	4,451,381	29,153,655	1,696,223	35,301,259	51.80	(318,151)	(72,261)	34,910,847
Good	6,485,730	7,888,486	1,226,780	15,600,996	22.90	(13,665)	(144,840)	15,442,491
Below normal	1,763,682	787,472	—	2,551,154	3.74	(2,763)	(395,820)	2,152,571
	₩15,502,970	₩47,599,026	₩5,044,961	₩68,146,957	100.00	₩(396,981)	₩(622,673)	₩67,127,303

2) Aging analysis of loans that are past due but not impaired

Aging analysis of loans that are past due but not impaired as of December 31, 2017, are as follows (Korean won in millions):

(December 31, 2017)

	Loans							
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees and costs	Allowances	Carrying amount
Within one months	₩ 30	₩—	₩—	₩ 30	100.00	₩—	₩(22)	₩ 8
Within two months	—	—	—	—	—	—	—	—
Within three months	—	—	—	—	—	—	—	—
Over three months	—	—	—	—	—	—	—	—
	₩ 30	₩—	₩—	₩ 30	100.00	₩—	₩(22)	₩ 8

3) Loans assessed for impairment on individual basis

Loans assessed for impairment on individual basis by country and industry of the Bank's counterparties, as of December 31, 2017, are as follows (Korean won in millions):

(December 31, 2017)

	Loans			Allowance			Allowance ratio (%)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Manufacturing	₩3,449,650	₩ 35,365	₩3,485,015	₩(2,484,785)	₩ (35,365)	₩(2,520,150)	72.03	100.00	72.31
Transportation	—	17,218	17,218	—	—	—	—	—	—
Construction	1,187	—	1,187	(1,187)	—	(1,187)	100.00	—	100.00
Public Sector & Others	—	105,841	105,841	—	(79,720)	(79,720)	—	75.32	75.32
	₩3,450,837	₩158,424	₩3,609,261	₩(2,485,972)	₩(115,085)	₩(2,601,057)	72.04	72.64	72.07

(5) Credit quality of securities (debt securities)

1) Financial assets at FVTPL and Securities (debt securities) exposed to credit risk as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	12 month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Grade1	₩ 973,885	₩—	₩—	₩ 973,885
Grade2	15,087	—	—	15,087
Grade3	83,802	—	—	83,802
Grade4	45,025	—	—	45,025
Grade5	—	—	—	—
Total	₩1,117,799	₩—	₩—	₩1,117,799

(December 31, 2017)

Securities that are neither past due nor impaired	₩1,039,660

2) Credit quality of securities (debt securities) that are neither past due nor impaired as December 31, 2017, are as follows (Korean won in millions):

(December 31, 2017)

	Credit quality(*)					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Financial assets at FVTPL	₩ 38,665	₩—	₩—	₩ —	₩ —	₩ 38,665
AFS financial assets	911,518	—	—	—	—	911,518
HTM financial assets	89,477	—	—	—	—	89,477
	₩1,039,660	₩—	₩—	₩ —	₩ —	₩1,039,660

(*) Credit quality is classified based on internal credit quality grade as below:

	Credit rating
Grade 1	AAA ~ BBB
Grade 2	BBB- ~ BB
Grade 3	BB- ~ B
Grade 4	B- ~ C
Grade 5	D

(6) Concentration of credit risk

The amounts disclosed below exclude loan valuation adjustment related to fair value hedging amounting to ₩17,139 million and ₩24,182 million as of June 30, 2018, and December 31, 2017, respectively.

1) Loans by country where the credit risk belongs to as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(Jun. 30, 2018)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Asia:							
Korea	₩17,189,663	6,727,446	1,132,460	25,049,569	34.26	(7,656)	(2,153,817)
China	—	1,813,432	268,402	2,081,834	2.85	(453)	(32,884)
Saudi Arabia	—	3,845,382	12,812	3,858,194	5.28	(48,872)	(7,919)
India	—	3,197,139	45,267	3,242,406	4.44	(20,626)	(5,104)
Indonesia	17,000	3,343,157	8,947	3,369,104	4.61	(65,791)	(12,657)
Vietnam	—	3,910,463	9,233	3,919,696	5.36	(22,576)	(19,266)
Australia	—	2,170,037	45,667	2,215,704	3.03	(19,001)	(2,817)
Philippines	—	155,779	2,632	158,411	0.22	(40)	(914)
Qatar	—	684,215	—	684,215	0.94	(2,695)	(3,674)
Singapore	—	244,161	103,057	347,218	0.47	(1,027)	(700)
Oman	—	1,035,831	9,495	1,045,326	1.43	(11,158)	(3,693)
Hong Kong	—	1,086,769	581,156	1,667,925	2.28	(2,317)	(1,257)
The United Arab Emirates	—	3,212,203	4,554	3,216,757	4.40	(25,209)	(967)
Others	—	3,055,587	606,588	3,662,175	5.01	(50,585)	(36,115)
Subtotal	17,206,663	34,481,601	2,830,270	54,518,534	74.57	(278,006)	(2,281,784)
Europe:							
Russia	—	366,756	—	366,756	0.50	(8)	(1,061)
United Kingdom	—	469,614	68,770	538,384	0.74	(1,478)	(730)
France	—	170,954	156,038	326,992	0.45	(2,053)	(297)
Netherlands	—	2,767	24,143	26,910	0.04	—	(85)
Malta	—	120,904	—	120,904	0.17	(1,046)	(132)
Uzbekistan	—	689,743	68,720	758,463	1.04	(6,009)	(7,671)
Greece	—	236,121	—	236,121	0.32	(1,263)	(281)
Turkey	—	799,541	12,511	812,052	1.11	(16,340)	(3,090)
Germany	—	270,860	130	270,990	0.37	(432)	(580)
Ukraine	—	103,911	—	103,911	0.14	(2,058)	(1,221)
Cyprus	—	222,117	—	222,117	0.30	(2,090)	(57)
Hungary	—	143,110	—	143,110	0.20	(1,063)	(19,821)
Others	—	739,675	73,793	813,468	1.11	(4,351)	(3,861)
Subtotal	—	4,336,073	404,105	4,740,178	6.48	(38,191)	(38,887)
America:							
Panama	—	1,216,011	—	1,216,011	1.66	(2,935)	(4,192)
United States	—	2,412,273	54,683	2,466,956	3.37	(5,539)	(30,956)
The British Virgin Islands	—	207,749	—	207,749	1.13	(2,229)	(377)
Mexico	—	823,766	—	823,766	1.31	(5,962)	(1,921)
Bermuda	—	957,382	—	957,382	2.93	(6,937)	(61,783)
Brazil	—	2,142,974	—	2,142,974	1.95	(5,260)	(5,234)
Others	—	1,422,087	6,547	1,428,634	12.64	(5,126)	(30,528)
Subtotal	—	9,182,242	61,230	9,243,472	1.13	(33,988)	(134,991)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Africa:							
Marshall Islands	—	2,225,096	—	2,225,096	3.04	(10,080)	(2,635)
Liberia	—	438,505	—	438,505	0.60	(3,111)	(45,837)
Madagascar	—	389,134	—	389,134	0.53	(1,692)	(65,380)
Others	—	1,551,268	3,077	1,554,345	2.13	(17,482)	(131,086)
Subtotal	—	4,604,003	3,077	4,607,080	6.30	(32,365)	(244,938)
Total	17,206,663	52,603,919	3,298,682	73,109,264	100.00	(382,550)	(2,700,600)

(December 31, 2017)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Asia:							
Korea	₩18,939,007	₩ 5,315,232	₩ 604,003	₩24,858,242	34.58	₩ (6,410)	₩(2,995,149)
China	—	1,833,920	311,601	2,145,521	2.98	(366)	(37,646)
Saudi Arabia	—	3,795,685	24,637	3,820,322	5.31	(52,670)	(8,303)
India	—	2,743,764	26,628	2,770,392	3.85	(22,580)	(4,003)
Indonesia	17,000	3,234,658	8,326	3,259,984	4.54	(70,546)	(10,627)
Vietnam	—	3,250,478	16,027	3,266,505	4.54	(22,466)	(20,972)
Australia	—	2,170,414	836	2,171,250	3.02	(19,996)	(4,234)
Philippines	—	245,572	—	245,572	0.34	(50)	(10,126)
Qatar	—	678,507	—	678,507	0.94	(2,832)	(2,302)
Singapore	—	163,068	75,507	238,575	0.33	(851)	(318)
Oman	—	975,651	10,707	986,358	1.37	(11,643)	(3,121)
Hong Kong	—	999,457	387,148	1,386,605	1.93	(2,383)	(2,491)
The United Arab Emirates	—	2,921,077	4,863	2,925,940	4.08	(27,197)	(6,928)
Others	—	2,296,222	3,168,744	5,464,966	7.61	(53,012)	(16,618)
Subtotal	18,956,007	30,623,705	4,639,027	54,218,739	75.42	(293,002)	(3,122,838)
Europe:							
Russia	—	362,699	—	362,699	0.50	(15)	(1,208)
United Kingdom	—	444,050	66,542	510,592	0.71	(1,469)	(433)
France	—	144,968	3,062	148,030	0.21	(2,188)	(83)
Netherlands	—	2,642	12,918	15,560	0.02	—	(44)
Malta	—	125,602	—	125,602	0.17	(1,211)	—
Uzbekistan	—	669,111	155,895	825,006	1.15	(6,263)	(4,770)
Greece	—	237,504	—	237,504	0.33	(1,327)	(114)
Turkey	—	659,824	2,802	662,626	0.92	(9,059)	(1,999)
Germany	—	281,095	402	281,497	0.39	(478)	(709)
Ukraine	—	119,102	—	119,102	0.17	(3,000)	(91)
Cyprus	—	232,689	—	232,689	0.32	(2,354)	—
Hungary	—	145,347	—	145,347	0.20	(1,095)	(5,433)
Others	—	568,424	99,041	667,465	0.94	(3,692)	(2,097)
Subtotal	—	3,993,057	340,662	4,333,719	6.03	(32,151)	(16,981)
America:							
Panama	—	1,215,278	—	1,215,278	1.69	(3,273)	(6,440)
United States	—	2,540,975	72,629	2,613,604	3.64	(7,733)	(80,463)
The British Virgin Islands	—	219,215	—	219,215	0.30	(2,363)	(47)
Mexico	—	834,136	—	834,136	1.16	(6,167)	(2,194)
Bermuda	—	819,398	—	819,398	1.14	(7,173)	(16,533)
Brazil	—	2,097,645	—	2,097,645	2.92	(5,589)	(4,117)
Others	—	1,426,809	3,299	1,430,108	1.99	(5,843)	(23,511)
Subtotal	—	9,153,456	75,928	9,229,384	12.84	(38,141)	(133,305)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Africa:							
Marshall Islands	—	1,903,658	—	1,903,658	2.65	(11,349)	(8,025)
Liberia	—	444,802	—	444,802	0.62	(3,344)	(666)
Madagascar	—	371,684	—	371,684	0.52	(1,832)	(1,200)
Others	—	1,382,260	—	1,382,260	1.92	(18,294)	(3,980)
Subtotal	—	4,102,404	—	4,102,404	5.71	(34,819)	(13,871)
Total	₩18,939,007	₩47,872,622	₩5,055,617	₩71,884,246	100.00	₩(398,113)	₩(3,286,995)

2) Loans by industry as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Loans					Deferred loan origination fees	Allowances
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)		
Manufacturing	₩11,697,301	₩23,687,505	₩ 437,929	₩35,822,735	49.00	₩(155,540)	₩(2,455,039)
Transportation	402,155	7,393,327	—	7,795,482	10.66	(38,686)	(155,116)
Financial institutions	3,680,368	6,937,118	2,810,943	13,428,429	18.37	(6,335)	(16,646)
Wholesale and retail	381,493	1,368,201	38,391	1,788,085	2.45	(3,333)	(11,137)
Real estate	—	106,590	—	106,590	0.15	(1,810)	(703)
Construction	625,189	419,750	446	1,045,385	1.43	(8,184)	(7,629)
Public sector and others	420,157	12,691,428	10,973	13,122,558	17.94	(168,662)	(54,330)
Total	₩17,206,663	₩52,603,919	₩3,298,682	₩73,109,264	100.00	₩(382,550)	₩(2,700,600)

(December 31, 2017)

	Loans					Deferred loan origination fees	Allowances
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)		
Manufacturing	₩14,316,259	₩21,739,146	₩ 264,633	₩36,320,038	50.53	₩(163,359)	₩(3,090,742)
Transportation	273,905	6,663,808	—	6,937,713	9.65	(39,566)	(27,784)
Financial institutions	2,477,740	4,929,310	4,762,571	12,169,621	16.93	(5,451)	(17,960)
Wholesale and retail	691,117	1,212,952	25,590	1,929,659	2.68	(3,447)	(8,444)
Real estate	9,000	318,201	—	327,201	0.46	(1,917)	(801)
Construction	752,442	599,986	447	1,352,875	1.88	(588)	(9,790)
Public sector and others	435,545	12,409,218	2,376	12,847,139	17.87	(183,785)	(131,474)
Total	₩18,956,008	₩47,872,621	₩5,055,617	₩71,884,246	100.00	₩(398,113)	₩(3,286,995)

3) Concentration of credit risk of financial assets at FVTPL and securities (debt securities) by industry as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Amount	Ratio (%)
Financial Assets at FVTPL		
Government and government sponsored institutions	₩ —	—
Banking and insurance	11,168	37.00
Others	19,014	63.00
Subtotal	30,182	100.00
Financial Assets at FVOCI		
Government and government sponsored institutions	101,639	9.91
Banking and insurance	880,625	85.90
Others	42,959	4.19
Subtotal	1,025,223	100.00
Financial Assets at amortized cost		
Government and government sponsored institutions	—	—
Banking and insurance	90,329	97.57
Others	2,247	2.43
Subtotal	92,576	100.00
Total	₩1,147,981	

(December 31, 2017)

	Amount	Ratio (%)
Financial Assets at FVTPL		
Government and government sponsored institutions	₩ —	—
Banking and insurance	12,729	32.92
Others	25,936	67.08
Subtotal	38,665	100.00
AFS financial assets		
Government and government sponsored institutions	165,117	18.11
Banking and insurance	370,859	40.69
Others	375,542	41.20
Subtotal	911,518	100.00
HTM financial assets		
Government and government sponsored institutions	5,356	5.98
Banking and insurance	61,076	68.26
Others	23,045	25.76
Subtotal	89,477	100.00
Total	₩1,039,660	

4) Concentration of credit risk of financial assets at FVTPL and securities (debt securities) by country as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Jun. 30, 2018	
	Amount	Ratio (%)
Financial assets at FVTPL		
Korea	₩ 13,403	44.41
Others	16,779	55.59
Subtotal	30,182	100.00
Financial Assets at FVOCI		
Korea	289,083	28.20
Others	736,140	71.80
Subtotal	1,025,223	100.00
Financial Assets at amortized cost		
Korea	38,997	42.12
Others	53,579	57.88
Subtotal	92,576	100.00
Total	₩1,147,981	

(December 31, 2017)

	Dec. 31, 2017	
	Amount	Ratio (%)
Financial assets at FVTPL		
United States	₩ 24,895	64.39
Others	13,770	35.61
Subtotal	38,665	100.00
AFS financial assets		
Korea	323,725	35.51
United States	427,449	46.89
Others	160,334	17.60
Subtotal	911,518	100.00
HTM financial assets		
Korea	28,616	31.98
China	27,912	31.19
Others	32,949	36.83
Subtotal	89,477	100.00
Total	₩1,039,660	

5) Credit enhancement and its financial effect as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Loans(*1)	Acceptances and guarantees	Unused loan commitments	Total	Ratio (%)
Maximum exposure to credit risk	₩72,726,713	₩41,427,133	₩16,355,510	₩130,509,356	100.00
Credit enhancement:					
Deposits and savings	110,589	94,519	7,016	212,124	0.16
Export guarantee insurance	25,367	802,993	1,891	830,251	0.64
Guarantee	4,504,641	1,815,343	1,292,395	7,612,379	5.82
Securities	157,196	410,179	17,400	584,775	0.45
Real estate	1,801,462	1,242,173	109,221	3,152,856	2.42
Ships	810,790	206,783	—	1,017,573	0.78
Others	1,472,942	—	10,452	1,483,394	1.14
Subtotal	8,882,987	4,571,990	1,438,375	14,893,352	11.41
Exposure to credit risk after deducting credit enhancement	₩63,843,726	₩36,855,143	₩14,917,135	₩115,616,004	88.59

(*1) Loans exclude loans valuation adjustment related to fair value hedging.

(December 31, 2017)

	Loans(*1)	Acceptances and guarantees	Unused loan commitments	Total	Ratio (%)
Maximum exposure to credit risk	₩71,486,133	₩42,808,774	₩19,737,788	₩134,032,695	100.00
Credit enhancement:					
Deposits and savings	93,112	93,168	7,840	194,120	0.15
Export guarantee insurance	—	884,694	1,806	886,500	0.66
Guarantee	3,851,033	1,902,263	1,381,731	7,135,027	5.32
Securities	149,004	410,282	17,450	576,736	0.43
Real estate	1,720,631	1,146,484	432,126	3,299,241	2.46
Ships	859,813	205,874	9,643	1,075,330	0.80
Others	1,515,638	23,402	9,838	1,548,878	1.16
Subtotal	8,189,231	4,666,167	1,860,434	14,715,832	10.98
Exposure to credit risk after deducting credit enhancement	₩63,296,902	₩38,142,607	₩17,877,354	₩119,316,863	89.02

(*1) Loans exclude loans valuation adjustment related to fair value hedging.

4-3. Liquidity risk

(1) Overview of liquidity risk

Liquidity risk is the risk that the Bank is unable to meet its payment obligations arising from financial liabilities as they become due. The Bank discloses all financial asset, financial liabilities and off-balance-sheet items, such as loan commitments and analysis of the contractual maturity, which are related to liquidity risk, into seven categories. The cash flows disclosed in the maturity analysis are undiscounted contractual amounts, including principal and future interest, which resulted in disagreement with the discounted cash flows included in the separate statements of financial position. However, for derivatives, each discounted cash flow consisting of current fair value is presented.

(2) Principles of the liquidity risk management

1) Liquidity risk is managed with integration. The Bank measures, reports and controls liquidity risk by quantification with reasonable method.

2) Liquidity risk reflects financing plans and fund-using plans, and the Bank reports the liquidity risk with preciseness, timeliness and consistency.

3) The Bank establishes liquidity risk management strategy by analyzing liquidity maturity, liquidity gap structure and market environment.

(3) Liquidity risk management

Risk management department monitors changes by liquidity risk sources and compliance of risk limits. It notifies related departments to prepare countermeasures in case the measured liquidity risk is close to risk limits. Also, it analyzes crisis situations and effects of the crisis situations and reports to the Risk Management Committee on a regular basis. Each related department monitors changes of liquidity risk sources and compliance of risk limits by itself and if exposure to new risk is expected, it discusses the matter with the head of risk management department.

(4) Measurement of liquidity risk

The Bank measures liquidity ratio, liquidity gap ratio and others for local currency and foreign currencies and simulates analysis reflecting market environment, product features and the Bank's strategies.

(5) Analysis on remaining contractual maturity of financial liabilities and off-balance-sheet items

Remaining contractual maturity and amount of financial liabilities and off-balance-sheet items as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	On demand	Within 1 month	1 to 3 months	3 to 6 Months	6 to 12 months	1 year to 5 years	Over 5 years	Total
Financial liabilities:								
Financial liabilities at FVTPL	₩ 1,012,308	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 1,012,308
Hedging derivative liabilities	—	7,260	36,855	18,017	148,442	824,891	739,954	1,775,419
Borrowings	—	417,190	1,747,505	422,228	285,943	3,730,274	332,616	6,935,756
Debentures	—	1,011,349	3,509,201	6,006,009	9,491,042	34,879,585	17,840,671	72,737,857
Other financial liabilities	—	1,365,664	2,052	423,324	387	59,529	866,422	2,717,378
	₩ 1,012,308	₩2,801,463	₩5,295,613	₩6,869,578	₩9,925,814	₩39,494,279	₩19,779,663	₩85,178,718
Off-balance sheet items(*):								
Commitments	₩16,355,510	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩16,355,510
Financial guarantee contracts	14,952,448	—	—	—	—	—	—	14,952,448
	₩31,307,958	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩31,307,958

(*) Guarantees and loan commitments and other credit facilities provided by the Bank have maturities. However, if the counterparty requests the payment immediately, the payment must be fulfilled.

(December 31, 2017)

	On demand	Within 1 month	1 to 3 months	3 to 6 Months	6 to 12 months	1 year to 5 years	Over 5 years	Total
Financial liabilities:								
Financial liabilities at FVTPL	₩ 911,778	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 911,778
Hedging derivative liabilities	—	206	57,322	91,587	45,610	449,538	413,933	1,058,196
Borrowings	—	216,013	15,770	1,139,708	424,604	3,936,528	575,566	6,308,189
Debentures	—	912,759	3,000,853	5,332,189	9,803,980	31,884,629	17,443,603	68,378,013
Other financial liabilities	—	985,367	—	—	65,689	34,810	708,632	1,794,498
	₩ 911,778	₩2,114,345	₩3,073,945	₩6,563,484	₩10,339,883	₩36,305,505	₩19,141,734	₩78,450,674
Off-balance sheet items(*):								
Commitments	₩19,737,788	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩19,737,788
Financial guarantee contracts	14,493,065	—	—	—	—	—	—	14,493,065
	₩34,230,853	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩34,230,853

(*) Guarantees and loan commitments and other credit facilities provided by the Bank have maturities. However, if the counterparty requests the payment immediately, the payment must be fulfilled.

4-4. Market risk

(1) Overview of market risk

1) Definition of market risk

Market risk is the risk of possible losses that arise from the changes of market factors, such as interest rate, stock price, foreign exchange rate, commodity value and other market factors related to the fair value or future cash flows of the financial instruments. The Bank classifies exposures to market risk into either foreign exchange rate risk or interest rate risk. Foreign exchange risk means that possible losses on assets and liabilities denominated in foreign currencies due to changes of foreign exchange rate. Interest rate risk means that possible losses on assets and liabilities due to changes of interest rate.

2) Market risk management group

The Bank operates the Risk Management Committee and the Risk Management Council for managing risks and risk limits. The Risk Management Practices Committee assists the Risk Management Committee and the Risk Management Council for practical matters, such as managing adequate assets and liabilities by analyzing foreign exchange risk, interest rate risk, liquidity risk, money balance plan and effects by initiating new product. Market risk is managed by product and currency for minimizing segments exposed to changes of foreign exchange, interest rate and securities' price. Foreign exchange risk is measured by definite method and probabilistic method and definite method is used for limits management. Interest rate value at risk ("VaR") and interest rate earning at risk ("EaR") are measured by BIS standards, definite method and probabilistic method and definite method is used for limits management. Meanwhile, the Bank performs financial crisis analysis supposing exceptional, but possible events for evaluating latent weakness. The analysis is used for important decision making, such as risk mitigation, emergency plan development and limit setup. The results of the analysis are reported to the board of directors and management on a quarterly basis.

(2) Foreign exchange risk

1) Management of foreign exchange risk

Foreign exchange risk management limit is set up and included in internal capital management limit. A risk management division head monitors changes of foreign exchange risk by source and compliance of risk limits regularly. A finance division head also monitors changes of foreign exchange risk by source and compliance of risk limits. The finance division head needs to cooperate with the risk management division head in case it is expected that the Bank will be exposed to a new risk. The risk management division head orders related divisions to prepare countermeasures in case it is apprehended that foreign exchange risk exceeds risk limit. If foreign exchange risk exceeds the risk limit, the risk management division head orders related divisions to prepare countermeasures and reports to Risk Management Committee after resolving the exceeded limit problem.

2) Measurement of foreign exchange risk

Foreign exchange risk is managed by foreign exchange VaR and foreign exchange position. Foreign exchange VaR is measured on a monthly basis and foreign exchange position is measured on a daily basis. It is measured separately by currency for assets and liabilities denominated in foreign currencies exceeding 5% of total assets and liabilities denominated in foreign currencies.

3) Measurement method

① VaR

The Bank uses a yearly VaR to measure market risk. The yearly VaR is a statistically estimated maximum amount of loss that could occur in one year under normal distribution of financial variables. The Bank calculates VaR using equal weighted-average method based on historical changes in market rates, prices and volatilities over the previous five years data and measures VaR at a 99% single tail confidence level. VaR is a commonly used market risk management technique. However, the method has some shortcomings.

VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movement, however, is not necessarily a good indicator of future events, as there may be conditions and circumstances in the future that the model does not anticipate. As a result, the timing and magnitude of the actual losses can be different, depending on the assumptions made at the time of calculation. In addition, the time periods used for the model, generally one day or 10 days, are assumed to be a sufficient holding period before liquidating the relevant underlying positions. If these holding periods are not sufficient, or too long, the VaR results may understate or overstate the potential loss.

② Stress testing

The stress testing is carried out to analyze the abnormal market situation reflecting intrinsic volatility of foreign exchange that has significant influent on the value of portfolio. The Bank mainly uses historical scenario tool and also uses hypothetical scenario tool for the analysis of an abnormal market situation. Stress testing is performed at least once in every quarter.

③ Results of measurement

Results of foreign exchange VaR as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018				Dec. 31, 2017			
	Average	Minimum	Maximum	Ending	Average	Minimum	Maximum	Ending
Foreign exchange risk	₩20,185	₩4,635	₩36,969	₩12,300	₩55,558	₩6,117	₩111,035	₩37,718

(3) Interest rate risk

1) Management of interest rate risk

Interest rate risk management limit is set up and included in internal capital management limit. A risk management division head monitors changes of interest rate risk by source and compliance of risk limits regularly. A finance division head also monitors changes of interest rate risk by source and compliance of risk limits. The finance division head needs to cooperate with the risk management division head in case it is expected that the Bank will be exposed to a new risk. The risk management division head orders related divisions to prepare countermeasures in case it is apprehended that interest rate risk exceeds risk limit. If interest rate risk exceeds the risk limit, the risk management division head orders related divisions to prepare countermeasures and reports to Risk Management Committee after resolving the exceeded limit problem.

2) Measurement of interest rate risk

Interest rate risk is managed by measuring interest rate EaR and interest rate VaR and uses interest rate sensitivity gap and duration gap as supplementary index. Interest rate EaR and interest rate VaR are measured on a monthly basis, and interest rate sensitivity gap and duration gap are measured on a daily basis. The Bank simulates analysis reflecting market environment, product features and the Bank's strategies.

3) Measurement method

① VaR

The Bank uses a yearly VaR to measure market risk. The yearly VaR is a statistically estimated maximum amount of loss that could occur in one year under normal distribution of financial variables. The Bank calculates VaR using equal weighted-average method based on historical changes in market rates, prices and volatilities over the previous five years data and measures VaR at a 99% single tail confidence level. This means the actual amount of loss may exceed the VaR, on average, once out of 100 business days. VaR is a commonly used market risk management technique. However, the method has some limitations.

VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movement, however, is not necessarily a good indicator of future events, as there may be conditions and circumstances in the future that the model does not anticipate. As a result, the timing and magnitude of the actual losses can be different depending on the assumptions made at the time of calculation. In addition, the time periods used for the model, generally one day or 10 days, are assumed to be a sufficient holding period before liquidating the relevant underlying positions. If these holding periods are not sufficient or too long, the VaR results may understate or overstate the potential loss.

② Stress testing

The stress testing is carried out to analyze the abnormal market situation reflecting intrinsic volatility of interest rate that has significant influence on the value of portfolio. The Bank mainly uses historical scenario tool and also uses hypothetical scenario tool for the analysis of an abnormal market situation. Stress testing is performed at least once in every quarter.

③ Results of measurement

Results of interest rate VaR as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018				Dec. 31, 2017			
	Average	Minimum	Maximum	Ending	Average	Minimum	Maximum	Ending
Interest rate risk	₩84,180	₩37,984	₩112,921	₩37,984	₩112,024	₩58,413	₩179,886	₩96,423

4-5. Capital risk

The Bank follows the standard of capital adequacy established by the Financial Services Commission. The standard is based on Basel III, which was established by Basel Committee on Banking Supervision in BIS. In Korea, this standard has been followed since December 2013. According to the standard, domestic banks should maintain at least 8% or above of BIS capital ratio for risk-weighted asset, and quarterly report BIS capital ratio to the FSS.

According to Korean Banking Supervision rules for operations, the Bank's capitals are mainly divided into two categories:

1) Tier 1 capital (basic capital): Basic capital is composed of capital stock-common and other basic capital. Capital stock-common includes common stock satisfied with qualifications, capital surplus,

retained earnings, accumulated other comprehensive income, other reserves and non-controlling interests among the common stock of consolidated subsidiaries. Other basic capital includes securities and capital surplus satisfied with qualifications

2) Tier 2 capital (supplementary capital): Supplementary capital is composed of the securities and capital surplus satisfied with qualifications, non-controlling interests among the securities of consolidated subsidiaries and the amounts of less than below 1.25% of credit risk-weighted asset like allowance for credit losses in respect of credits classified as normal or precautionary.

The risk-weighted asset includes intrinsic risks in total assets, errors of internal operation processes and loss risk from external events. It indicates a size of assets reflecting the level of risks that the Bank bears. The Bank computes the risk-weighted asset by risks (credit risk, market risk and operational risk) and uses it for calculation of BIS capital ratio.

5. FINANCIAL ASSETS AND FINANCIAL LIABILITIES:

5-1. Classification and fair value

(1) Carrying amounts and fair values of financial instruments as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Classification	Carrying amount	Fair value
Financial assets:			
Cash and due from financial institutions	Non-recurring	₩ 4,864,717	₩ 4,864,730
Financial assets at FVTPL	Recurring	1,930,661	1,930,661
Hedging derivative assets	Recurring	63,268	63,268
Loans at amortized cost	Non-recurring	70,043,253	70,129,266
Financial assets at FVOCI	Recurring	8,249,619	8,249,619
Financial assets at amortized cost	Non-recurring	92,542	92,477
Other financial assets	Non-recurring	1,266,116	1,266,116
		₩86,510,176	₩86,596,137
Financial liabilities:			
Financial liabilities at FVTPL	Recurring	₩ 1,012,308	₩ 1,012,308
Hedging derivative liabilities	Recurring	1,775,419	1,775,419
Borrowings	Non-recurring	6,601,474	6,596,351
Debentures	Non-recurring	64,308,624	63,466,021
Other financial liabilities	Non-recurring	2,717,379	2,717,379
		₩76,415,204	₩75,567,478

(December 31, 2017)

	Classification	Carrying amount	Fair value
Financial assets:			
Cash and due from financial institutions	Non-recurring	₩ 2,091,920	₩ 2,092,008
Financial assets at FVTPL	Recurring	1,616,973	1,616,973
Hedging derivative assets	Recurring	228,121	228,121
Loans	Non-recurring	68,223,320	69,459,210
AFS financial assets	Recurring	6,692,478	6,692,478
HTM financial assets	Non-recurring	89,477	89,119
Other financial assets	Non-recurring	933,510	933,510
		₩79,875,799	₩81,111,419
Financial liabilities:			
Financial liabilities at FVTPL	Recurring	₩ 911,778	₩ 911,778
Hedging derivative liabilities	Recurring	1,058,196	1,058,196
Borrowings	Non-recurring	6,013,457	5,985,700
Debentures	Non-recurring	60,685,098	61,193,068
Other financial liabilities	Non-recurring	1,794,498	1,794,498
		₩70,463,027	₩70,943,240

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. For each class of financial assets and financial liabilities, the Bank discloses the fair value of that class of assets and liabilities in a way that permits them to be compared with their carrying amount at the end of each reporting period. The best evidence of fair value of financial instruments is quoted price in an active market.

Methods for measuring fair value of financial instruments are as follows:

Financial instruments	Method of measuring fair value
Loans and receivables	As demand deposits and transferable deposits do not have maturity and are readily convertible to cash, the carrying amounts of these deposits approximate their fair values. Fair values of the deposits with the maturity of more than one year are determined by discounted cash flow model ("DCF model"). DCF model is also used to determine the fair value of loans. Fair value is determined by discounting the cash flows expected from the each contractual period by applying the discount rates for each period.
Investment securities	Trading financial assets and liabilities and AFS financial assets are measured at fair value using a quoted market price in an active market. If a quoted market price is not available, they are measured by using a price quoted by a third party, such as a pricing service or broker or using the DCF model.
Derivatives	For exchange traded derivative, quoted price in active market is used to determine fair value and for OTC derivative, fair value is determined primarily using the DCF model. The Bank uses internally developed valuation models that are widely used by market participants to determine fair value of plain OTC derivatives including option, interest rate swap and currency swap based on observable market parameters. However, some complex financial instruments are valued using the results of independent pricing services, where part or all of the inputs are not observable in the market.
Borrowings	Fair value is determined using DCF model discounting contractual future cash flows by appropriate discount rate.
Debentures	Fair value of debentures denominated in local currency is determined by using the valuation of independent third-party pricing services in accordance with the market prices that are quoted in active markets. Fair value of debentures denominated in foreign currencies is determined by DCF model.

Fair values of financial assets and financial liabilities classified as fair value Level 3 of the fair value hierarchy are determined by using the valuation of independent third-party pricing services. Meanwhile, carrying amounts of other financial assets and financial liabilities are regarded as an approximation of fair values.

(2) Fair value hierarchy

Fair value hierarchy of financial assets and liabilities, which are not measured at fair value as of June 30, 2018, and December 31, 2017, is as follows (Korean won in millions):

(Jun. 30, 2018)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from financial institutions	₩1,737,222	₩ —	₩ 3,127,508	₩ 4,864,730
Loans at amortized cost	—	—	70,129,266	70,129,266
Financial assets at amortized cost	—	92,477	—	92,477
Other financial assets	—	—	1,266,116	1,266,116
Total	₩1,737,222	₩ 92,477	₩74,522,890	₩76,352,589
Financial liabilities:				
Borrowings	₩ —	₩ 6,596,351	₩ —	₩ 6,596,351
Debentures	—	63,466,021	—	63,466,021
Other financial liabilities	—	—	2,717,379	2,717,379
Total	₩ —	₩70,062,372	₩ 2,717,379	₩72,779,751

(December 31, 2017)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from financial institutions	₩647,521	₩ —	₩ 1,444,487	₩ 2,092,008
Loans	—	—	69,459,210	69,459,210
HTM financial assets	—	89,119	—	89,119
Other financial assets	—	—	933,510	933,510
	₩647,521	₩ 89,119	₩71,837,207	₩72,573,847
Financial liabilities:				
Borrowings	₩ —	₩ 5,985,700	₩ —	₩ 5,985,700
Debentures	—	61,193,068	—	61,193,068
Other financial liabilities	—	—	1,794,498	1,794,498
	₩ —	₩67,178,768	₩ 1,794,498	₩68,973,266

Fair value hierarchy of financial assets and liabilities measured at fair value as of June 30, 2018, and December 31 2017, is as follows (Korean won in millions):

(June 30, 2018)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩ —	₩1,720,239	₩ 210,422	₩ 1,930,661
Hedging derivative assets	—	63,268	—	63,268
Financial assets at FVOCI	306,212	925,754	7,017,653	8,249,619
	₩306,212	₩2,709,261	₩7,228,075	₩10,243,548
Financial liabilities:				
Financial liabilities at FVTPL	₩ —	₩1,012,308	₩ —	₩ 1,012,308
Hedging derivative liabilities	—	1,775,419	—	1,775,419
	₩ —	₩2,787,727	₩ —	₩ 2,787,727

(December 31, 2017)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩ 725,613	₩ 891,360	₩ —	₩1,616,973
Hedging derivative assets	—	228,121	—	228,121
AFS financial assets	319,416	812,471	3,906,416	5,038,303
	₩1,045,029	₩1,931,952	₩3,906,416	₩6,883,397
Financial liabilities:				
Financial liabilities at FVTPL	₩ —	₩ 911,778	₩ —	₩ 911,778
Hedging derivative liabilities	—	1,058,196	—	1,058,196
	₩ —	₩1,969,974	₩ —	₩1,969,974

The Bank classifies financial instruments as three level of fair value hierarchy as below:

Level 1: Financial instruments measured at quoted prices from active markets are classified as fair value Level 1. This level includes listed equity securities, derivatives, and government bonds traded in an active exchange market.

Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as Level 2. This level includes the majority of debt and general OTC derivatives such as swap, futures and options

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. This level includes unlisted equity securities, structured bonds and OTC derivatives.

The valuation techniques and input variables of Level 2 financial instruments subsequently not measured at fair value as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

(June 30, 2018)

	Fair value	Valuation techniques	Input variables
Financial assets			
Financial assets at amortized cost			
Debt securities	₩ 92,477	DCF Model	Discount rate
Financial liabilities			
Borrowings	6,596,351	DCF Model	Discount rate
Debentures	63,466,021	DCF Model	Discount rate

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
HTM financial assets			
Debt securities	₩ 89,119	DCF Model	Discount rate
Financial liabilities			
Borrowings	5,985,700	DCF Model	Discount rate
Debentures	61,193,068	DCF Model	Discount rate

The valuation techniques and input variables of Level 3 financial instruments subsequently not measured at fair value as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

(June 30, 2018)

	Fair value	Valuation techniques	Input variables
Financial assets			
Loans at amortized cost	₩70,129,266	DCF Model	Discount rate
Other financial assets	1,266,116	DCF Model	Discount rate
Financial liabilities			
Other financial liabilities	2,717,378	DCF Model	Discount rate

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
Loans	₩69,459,210	DCF Model	Discount rate
Other financial assets	933,510	DCF Model	Discount rate
Financial liabilities			
Other financial liabilities	1,794,498	DCF Model	Discount rate

The valuation techniques and input variables of Level 2 financial instruments, measured at fair value after initial recognition, as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

(June 30, 2018)

	Fair value	Valuation techniques	Input variables
Financial assets			
Financial assets at FVTPL:			
Debt securities	₩ 862,207	DCF Model	Discount rate
Derivative assets for trading	858,032	DCF Model	Discount rate
Hedging derivative assets	63,268	DCF Model	Discount rate
Financial assets at FVOCI:			
Debt securities	925,754	DCF Model	Discount rate
Financial liabilities			
Financial liabilities at FVTPL:			
Derivative liabilities for trading	1,012,308	DCF Model	Discount rate
Hedging derivative liabilities	1,775,419	DCF Model	Discount rate

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
Financial assets at FVTPL			
Debt securities	₩ 38,665	DCF Model	Discount rate
Derivative assets for trading	852,695	DCF Model	Discount rate
Hedging derivative assets	228,121	DCF Model	Discount rate
AFS financial assets			
Debt securities	812,471	DCF Model	Discount rate
Financial liabilities			
Financial liabilities at FVTPL			
Derivative liabilities for trading	911,778	DCF Model	Discount rate
Hedging derivative liabilities	1,058,196	DCF Model	Discount rate

Below table accounts for quantitative information of fair value using input factor, which is significant but unobservable, and relation between unobservable input factor and estimate of fair value.

(June 30, 2018)

	Fair value (Korean won in million)	Valuation techniques	Significant unobservable input factors	Range	Relationship between unobservable input factors and fair value estimates
Financial assets at FVTPL:					
Unlisted stock	₩ 17,430	DCF Model	Discount rate	8.93%	If discount rate is decreased (increased)/ if growth rate is increased (decreased), fair value is increased (decreased).
Marketable securities	115,530	NAV Methods			
Paid-in capital	64,059	CCA Methods			
Loans	13,403		Growth rate	—	
Financial assets at FVOCI:					
Unlisted stock	₩7,001,520	DCF Model NAV Methods	Discount rate	0.00%~ 17.27%	If discount rate is decreased (increased)/ if growth rate is increased (decreased), fair value is increased (decreased).
Paid-in capital	16,133	CCA Methods	Growth rate	—	

(December 31, 2017)

	Fair value (Korean won in millions)	Valuation techniques	Significant unobservable input factors	Range	Relationship between unobservable input factors and fair value estimates
AFS financial assets:					
Unlisted stock	₩3,906,416	DCF Model CCA Methods NAV Methods FTE Methods	Discount rate	5.49%~19.31%	If discount rate is decreased (increased)/ if growth rate is increased (decrease), fair value is increased (decreased).
			Growth rate	—	

1) Changes in Level 3 financial assets that are measured at fair value for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

	Beginning balance(*1)	Profit (loss)	Other comprehensive income	Purchases/ issues	Sales/ settlements	Transfers into Level 3 / Transfers out of Level 3	Ending balance
Financial assets							
Securities at FVTPL	₩ 134,325	₩9,910	₩ —	₩ 53,731	₩ (947)	₩ —	₩ 197,019
Loans at FVTPL	13,577	(174)	—	—	—	—	13,403
Financial assets at FVOCI	6,292,539	—	675,130	49,999	(15)	—	7,017,653
Total	₩6,440,441	₩9,736	₩675,130	₩103,730	₩ (962)	₩ —	₩7,228,075

(*1) The beginning balance was restated in accordance with K-IFRS No. 1109.

(December 31, 2017)

	Beginning balance	Profit (Loss)	Other comprehensive income	Purchases/ issues	Sales/ settlements	Transfers into Level 3 / Transfers out of Level 3	Ending balance
Financial assets							
AFS financial assets	₩3,931,733	₩(80)	₩(87,259)	₩64,366	₩(2,344)	₩—	₩3,906,416

2) In relation to changes in Level 3 of the fair value hierarchy, total gains or losses recognized in profit or loss for the period and total gains or losses for financial instruments held at the end of the reporting period in the separate statement of comprehensive income for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

	Net income (loss) from financial investments	
	Six months ended June 30, 2018	2017
Total gains (losses) on financial instruments held at the end of the reporting period	₩9,736	₩(80)
Total gains (losses) included in profit or loss for the period	₩9,736	₩(80)

3) The sensitivity of fair value analysis for the Level 3 financial instruments

The Bank performed the sensitivity analysis for the Level 3 financial instruments for which fair value would be measured differently upon reasonably possible alternative assumptions. The Bank classified the effect from changes upon the alternative assumptions into favorable effect and unfavorable effect and presented the most favorable effect or the most unfavorable effect in the table hereunder. Stocks are the financial instruments subject to sensitivity analysis, which are classified as Level 3 and of which changes in fair value are recognized as other comprehensive income. Meanwhile, equity instruments, which are recognized as cost among the financial instruments and are classified as Level 3 are excluded from the sensitivity analysis.

Sensitivity analysis details per market risk variable of each Level 3 financial instrument held and measured at fair value as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Net income (loss)		Other comprehensive income (loss)	
	Favorable	Unfavorable	Favorable	Unfavorable
Financial assets:				
Financial assets at FVTPL(*1)	₩1,155	₩(453)	₩ —	₩ —
Financial assets at FVOCI(*1)	—	—	4,736,889	(1,107,196)

(December 31, 2017)

	Net income (loss)		Other comprehensive income (loss)	
	Favorable	Unfavorable	Favorable	Unfavorable
Financial assets:				
AFS Financial assets(*1)	₩—	₩—	₩3,175,806	₩(936,590)

(*1) Changes in fair value of stocks are computed along with the increases or decreases in either growth rate from nil to 1% and discount rate or liquidation value from negative 1% to 1% and discount rate, which are unobservable inputs.

5-2. Carrying amounts of financial instruments

Carrying amounts of financial instruments as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Financial assets at FVTPL	Financial assets at FVOCI	Financial assets at amortized cost	Hedging derivative assets	Total
Financial assets:					
Cash and due from financial institutions	₩ —	₩ 4,864,717	₩ —	₩ —	₩ 4,864,717
Financial assets at FVTPL	1,930,661	—	—	—	1,930,661
Hedging derivative assets	—	—	—	63,268	63,268
Loans at amortized cost	—	70,043,253	—	—	70,043,253
Financial investments	—	92,542	8,249,619	—	8,342,161
Other financial assets	—	1,266,116	—	—	1,266,116
Total	₩1,930,661	₩76,266,628	₩8,249,619	₩63,268	₩86,510,176

	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Hedging derivative liabilities	Total
Financial liabilities:				
Financial liabilities at FVTPL	₩1,012,308	₩ —	₩ —	₩ 1,012,308
Hedging derivative liabilities	—	—	1,775,419	1,775,419
Borrowings	—	6,601,474	—	6,601,474
Debentures	—	64,308,624	—	64,308,624
Other financial liabilities	—	2,717,379	—	2,717,379
Total	₩1,012,308	₩73,627,477	₩1,775,419	₩76,415,204

(December 31, 2017)

	Financial assets at FVTPL	Loans	AFS financial assets	HTM financial assets	Hedging derivative assets	Total
Financial assets:						
Cash and due from financial institutions	₩ —	₩ 2,091,920	₩ —	₩ —	₩ —	₩ 2,091,920
Financial assets at FVTPL	1,616,973	—	—	—	—	1,616,973
Hedging derivative assets	—	—	—	—	228,121	228,121
Loans	—	68,223,320	—	—	—	68,223,320
Financial investments	—	—	6,692,478	89,477	—	6,781,955
Other financial assets	—	933,510	—	—	—	933,510
Total	₩1,616,973	₩71,248,750	₩6,692,478	₩89,477	₩228,121	₩79,875,799

	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Hedging derivative liabilities	Total
Financial liabilities:				
Financial liabilities at FVTPL	₩911,778	₩ —	₩ —	₩ 911,778
Hedging derivative liabilities	—	—	1,058,196	1,058,196
Borrowings	—	6,013,457	—	6,013,457
Debentures	—	60,685,098	—	60,685,098
Other financial liabilities	—	1,794,498	—	1,794,498
Total	₩911,778	₩68,493,053	₩1,058,196	₩70,463,027

5-3. Offset of financial instruments

The Bank has conditional rights of setoff that are enforceable and exercisable only in the events mentioned in agreements regardless of meeting some or all of the offsetting criteria in K-IFRS 1032 for financial instruments. Cash collaterals do not meet the offsetting criteria in K-IFRS 1032, but they can be set off with net amount of financial instruments.

The effects of netting agreements as of June 30, 2018, and December 31, 2017, are as follow (Korean won in millions):

(June 30, 2018)

	Gross amounts of recognized financial assets (liabilities)	Gross amounts of recognized financial liabilities (assets) to be setoff	Net amounts of financial assets (liabilities) presented in the separate statement of financial position	Amount that is not offset in the financial statements		Net amount
				Financial instruments	Cash collateral	
Financial assets:						
Derivatives	₩ 921,300	₩—	₩ 921,300	₩(290,538)	₩ (9,530)	₩ 621,232
Financial liabilities:						
Derivatives	2,787,727	—	2,787,727	(290,538)	(1,287,299)	1,209,890

(December 31, 2017)

	Gross amounts of recognized financial assets (liabilities)	Gross amounts of recognized financial liabilities (assets) to be setoff	Net amounts of financial assets (liabilities) presented in the separate statement of financial position	Amount that is not offset in the financial statements		Net amount
				Financial instruments	Cash collateral	
Financial assets:						
Derivatives	₩1,080,816	₩—	₩1,080,816	₩(535,438)	₩ (38,009)	₩507,369
Financial liabilities:						
Derivatives	1,969,974	—	1,969,974	(535,438)	(667,220)	767,316

5-4. Transfer of financial assets

The Bank has securities sold under repurchase agreements (“RP”), and it refers to the financial assets that have been transferred, but presented in the separate financial statements since the assets do not meet the conditions of derecognition. In case of securities sold under the RP, securities are disposed, but the Bank agrees to repurchase at the fixed amount, so that the Bank retains substantially all the risks and rewards of ownership of the securities. There are no carrying amounts of transferred assets and relevant liabilities as of June 30, 2018 and December 31, 2017.

6. OPERATING SEGMENT:

Though the Bank conducts business activities related to financial services, in accordance with relevant laws, such as the Export-Import Bank of Korea Act, it does not report separate segment information, as management considers the Bank to be operating under one core business.

7. CASH AND DUE FROM FINANCIAL INSTITUTIONS:

(1) Cash and cash equivalents as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Detail	Jun. 30, 2018	Dec. 31, 2017
Due from financial institutions in local currency	₩ 558,864	₩ 439,119
Due from financial institutions in foreign currencies	4,305,853	1,652,801
Subtotal	4,864,717	2,091,920
Restricted due from financial institutions	(2,115,494)	(985,926)
Due from financial institutions with original maturities of more than three months at acquisition date	(510,000)	(290,000)
Subtotal	(2,625,494)	(1,275,926)
Total(*1)	₩ 2,239,223	₩ 815,994

(*1) Equal to the cash and due from financial institutions as presented on the separate statements of cash flows.

(2) Restricted due from financial institutions as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Detail	Financial Institution	Jun. 30, 2018	Dec. 31, 2017	Reason for restriction
Others	DEUTSCHE BANK TRUST COMPANY AMERICAS and others	₩2,115,494	₩985,926	Credit support annex for derivative transactions

8. FINANCIAL ASSETS AT FVTPL:

Details of financial assets at FVTPL as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Jun. 30, 2018
Debt securities in local currency	
Paid-in capital	₩ 59,630
Beneficiary certificates	910,615
Subtotal	970,245
Debt securities in foreign currency	
Debt securities	16,779
Paid-in capital	4,429
Beneficiary certificates	50,343
Equity securities in foreign currency stocks	17,430
Subtotal	88,981
Loans at FVPL	
Privately placed corporate bonds	13,403
Derivative assets	
Interest product	481,069
Currency product	376,939
Others	24
Subtotal	858,032
Total	₩1,930,661

(December 31, 2017)

	Dec. 31, 2017
Equity securities	
Beneficiary certificates	₩ 725,613
Debt securities	
Debt securities in foreign currency	38,665
Derivative assets	
Stocks	1,444
Interest product	329,246
Currency product	521,982
Others	23
	852,695
Total	₩1,616,973

9. FINANCIAL INVESTMENTS:

Details of financial investments as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	Jun. 30, 2018
Financial assets at FVOCI	
Debt securities in local currency	
National bond	₩ 99,469
Beneficiary certificates	1
Derivative linked securities	50,004
Equity securities	
Stocks	7,208,262
Paid-in capital	16,133
Subtotal	7,373,869
Debt securities in foreign currencies	
Corporate bonds and etc.(*1)	796,927
Derivative linked securities	78,823
Subtotal	875,750
Financial assets at amortized cost	
Debt securities in foreign currencies	
Corporate bonds and etc.(*1)	92,542
Total	₩8,342,161

(December 31, 2017)

	Dec. 31, 2017
AFS securities in local currency	
Equity securities	
Marketable securities	₩ 220,370
Non-marketable securities	5,410,644
Equity investments in unincorporated entities	62,117
Others	65,642
Debt securities	
Debt securities	149,085
Subtotal	5,907,858
AFS securities in foreign currencies	
Equity securities	
Stocks	17,764
Paid-in capital	4,423
Debt securities	
Debt securities(*1)	762,433
Subtotal	784,620
HTM securities in foreign currencies	
Debt securities	
Debt securities(*1)	89,477
Total	₩6,781,955

(*1) Includes securities, which are pledged as collateral amounting to ₩42,986 million and ₩31,220 million as of June 30, 2018, and December 31, 2017, respectively.

10. LOANS AT AMORTIZED COST:

Loans as presented below exclude loan valuation adjustment related to fair value hedging amounting to ₩17,139 million and ₩24,182 million as of June 30, 2018, and December 31, 2017, respectively.

(1) Details of loans as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	Detail	Jun. 30, 2018	Dec. 31, 2017
Loans in local currency	Loans for export	₩11,393,483	₩12,027,416
	Loans for foreign investments	1,067,470	797,992
	Loans for import	2,222,326	1,959,237
	Troubled Debt Restructuring(*1)	1,637,343	2,161,537
	Others	886,040	2,009,825
	Subtotal	17,206,662	18,956,007
Loans in foreign currencies	Loans for export	27,774,645	25,985,848
	Loans for foreign investments	21,629,143	19,518,443
	Loans for rediscounted trading notes	1,009,530	—
	Loans for import	1,535,975	1,594,141
	Overseas funding loans	567,029	546,938
	Domestic usance bills(*2)	200,006	172,830
	Others	87,598	54,422
	Subtotal	52,803,926	47,872,622
Others			
	Foreign-currency bills bought	826,484	1,063,717
	Advance payments on acceptances and guarantees	45,356	10,656
	Call loans	1,929,198	2,056,086
	Interbank loans in foreign currencies	297,638	1,925,158
	Subtotal	3,098,676	5,055,617
Total		73,109,264	73,109,264
Net deferred origination fees and costs		(382,550)	(382,550)
Allowance for loan losses		(2,700,600)	(2,700,600)
Total		₩70,026,114	₩68,199,138

(*1) Representing loans originated by the Bank to companies that are undergoing debt restructuring activities.

(*2) Representing receivables associated with letters of credit issued by domestic banks in Korea.

(2) Changes in allowance for loan losses for the six months ended June 30, 2018 and for the year ended December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

	12 month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩240,653	₩415,963	₩2,661,044	₩3,317,660
—Transfer to 12 month expected credit losses	1,163	(1,163)	—	—
—Transfer to lifetime expected credit losses	(4,438)	4,490	(52)	—
—Transfer to credit-impaired financial assets	(649)	(27,360)	28,009	—
Written-off	—	—	(602,436)	(602,436)
Collection of written-off loans	—	—	5,888	5,888
Loan-for-equity swap	—	—	(6,170)	(6,170)
Others	(33,886)	—	—	(33,886)
Unwinding effect	(10)	(22)	(17,429)	(17,461)
Foreign exchange translation	4,726	15,490	5,729	25,945
Additional provisions, net of reversals	27,750	5,978	(22,668)	11,060
Ending balance	₩235,309	₩413,376	₩2,051,915	₩2,700,600

(December 31, 2017)

	Individual assessment	Collective assessment	Total
Beginning balance	₩2,228,715	₩ 697,020	₩2,925,735
Written-off	(205,540)	(79,080)	(284,620)
Collection of written-off loans	445	18,094	18,539
Loan-for-equity swap	(48,404)	(4,093)	(52,497)
Others	—	(938,437)	(938,437)
Unwinding effect	(74,103)	(5,745)	(79,848)
Foreign exchange translation	(10,137)	(15,932)	(26,069)
Additional provisions, net of reversals	706,250	1,017,942	1,724,192
Transfer in (out)	372,475	(372,475)	—
Ending balance	₩2,969,701	₩ 317,294	₩3,286,995

11. INVESTMENTS IN ASSOCIATES AND SUBSIDIARIES:

(1) Details of investments in associates and subsidiaries as of June 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

(June 30, 2018)

Company(*1)	Detail	Location	Business	Year-end	Ownership (%)	Net asset	Carrying amount
KEXIM Bank UK Limited	Subsidiary	United Kingdom	Financial service	December	100.00	₩ 46,817	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	Vietnam	Financial service	December	100.00	16,520	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	Indonesia	Financial service	December	85.00	27,833	25,270
KEXIM Asia Limited	Subsidiary	Hong Kong	Financial service	December	100.00	63,668	49,139
Korea Asset Management Corporation	Associate	Korea	Financial service	December	25.86	448,334	380,520
Credit Guarantee and Investment Fund(*2,5)	Associate	Philippines	Financial service	December	11.07	116,477	115,486
Korea Marine Guarantee Inc.	Associate	Korea	Financial service	December	41.88	131,045	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.(*6)	Associate	Korea	Shipbuilding	December	81.25	(1,400,994)	—
DAESUN Shipbuilding & Engineering Co., Ltd.(*7)	Associate	Korea	Shipbuilding	December	83.03	(319,453)	—
KTB Newlake Global Healthcare PEF	Associate	Korea	Financial service	December	25.00	6,402	7,070
KBS-KDB Private Equity Fund (*2)	Associate	Korea	Financial service	December	19.99	3,714	3,762
Korea Shipping and Maritime Transportation	Associate	Korea	Financial service	December	40.00	338,732	400,000
Korea Aerospace Industries. Ltd.	Associate	Korea	Manufacturing	December	26.41	274,008	1,467,520
Total							₩2,642,502

(December 31, 2017)

Company(*1)	Detail	Location	Business	Year-end	Ownership (%)	Net asset	Carrying amount
KEXIM Bank UK Limited	Subsidiary	United Kingdom	Financial service	December	100.00	₩ 45,079	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	Vietnam	Financial service	December	100.00	15,568	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	Indonesia	Financial service	December	85.00	27,359	25,270
KEXIM Asia Limited	Subsidiary	Hong Kong	Financial service	December	100.00	60,176	49,139
Korea Asset Management Corporation	Associate	Korea	Financial service	December	25.86	450,571	380,520
Credit Guarantee and Investment Fund(*2,4)	Associate	Philippines	Financial service	December	14.29	113,046	115,486
Korea Marine Guarantee Inc.	Associate	Korea	Financial service	December	41.88	130,788	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.(*3,4)	Associate	Korea	Shipbuilding	December	81.25	(972,550)	—
DAESUN Shipbuilding & Engineering Co., Ltd.(*4,7)	Associate	Korea	Shipbuilding	December	67.30	(264,588)	—
KTB Newlake Global Healthcare PEF	Associate	Korea	Financial service	December	25.00	2,010	2,570
KBS-KDB Private Equity Fund	Associate	Korea	Financial service	December	20.83	2,096	2,367
Korea Shipping and Maritime Transportation	Associate	Korea	Financial service	December	40.00	304,812	362,000
Korea Aerospace Industries. Ltd.	Associate	Korea	Manufacturing	December	26.41	301,181	1,467,520
Total							₩2,598,607

(*1) In cases of associates, the amounts represent net asset after taking into account percentage of ownership.

(*2) As of June 30, 2018 and December 31, 2017, this entity is classified into an associate because the Bank has significant influence in the way of representation on the board of directors or equivalent governing body of the investee.

(*3) As of December 31, 2017, this entity was under the creditor-led work out programs. The Bank should had to at least 75% of the total creditor's loans to have substantive control based on the creditor's agreement. As the Bank had only 69.01% of the total creditor's loans, this was classified into associates.

(*4) The most recent financial statements were using (due to the unavailability of the ones as of December 31, 2017) in which the significant transactions or events, which occurred between the end of preceding reporting period of an associate and that of the Bank, had been reflected.

(*5) The most recent financial statements were using (due to the unavailability of the ones as of June 30, 2018) in which the significant transactions or events, which occurred between the end of preceding reporting period of an associate and that of the Bank, had been reflected.

(*6) Since the corporate restructuring process has been initiated during the current half-year and major decisions have been made by the courts, the Bank classified the entity as an associate not considering to have substantial control over the entity.
(*7) This entity was under the creditor-led work out programs. The Bank should have at least 75% of the total creditor's loans to have a substantive control based on the creditor's agreement. As the Bank had only 70.60% of the total creditor's loans, this was classified into associates.

(2) Changes in investments in associates and subsidiaries for the six months ended June 30, 2018 and for the year ended December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Company	Detail	Beginning balance	Acquisition	Disposals	Impairment loss	Ending balance
KEXIM Bank UK Limited	Subsidiary	₩ 48,460	₩ —	₩ —	₩ —	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	10,275	—	—	—	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	25,270	—	—	—	25,270
KEXIM Asia Limited	Subsidiary	49,139	—	—	—	49,139
Korea Asset Management Corporation	Associate	380,520	—	—	—	380,520
Credit Guarantee and Investment Fund	Associate	115,486	—	—	—	115,486
Korea Marine Guarantee Incorporated Company	Associate	135,000	—	—	—	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	—	—	—	—	—
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	—	—	—	—	—
KTB Newlake Global Healthcare PEF	Associate	2,570	4,500	—	—	7,070
KBS-KDB Private Equity Fund	Associate	2,367	1,870	(475)	—	3,762
Korea Shipping and Maritime Transportation	Associate	362,000	38,000	—	—	400,000
Korea Aerospace Industries. LTD.	Associate	1,467,520	—	—	—	1,467,520
Total		₩2,598,607	₩44,370	₩ (475)	₩ —	₩2,642,502

(December 31, 2017)

Company	Detail	Beginning balance	Acquisition	Disposals	Impairment loss	Ending balance
KEXIM Bank UK Limited	Subsidiary	₩ 48,460	₩ —	₩ —	₩ —	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	10,275	—	—	—	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	25,270	—	—	—	25,270
KEXIM Asia Limited	Subsidiary	49,139	—	—	—	49,139
Korea Asset Management Corporation	Associate	380,520	—	—	—	380,520
Credit Guarantee and Investment Fund	Associate	115,486	—	—	—	115,486
Korea Marine Guarantee Inc.	Associate	135,000	—	—	—	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	—	236	—	(236)	—
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	—	—	—	—	—
EQP Global Energy Infrastructure PEF	Associate	280	—	(280)	—	—
KTB Newlake Global Healthcare PEF	Associate	1,153	1,417	—	—	2,570
KBS-KDB Private Equity Fund	Associate	501	1,866	—	—	2,367
Korea Shipping and Maritime Transportation	Associate	—	362,000	—	—	362,000
Korea Aerospace Industries. Ltd.	Associate	—	1,467,520	—	—	1,467,520
Total		₩766,084	₩1,833,039	₩ (280)	₩ (236)	₩2,598,607

(3) Summarized financial information of associates and subsidiaries as of and for the six months ended June 30, 2018, and as of and for the year ended December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Company	Assets	Liabilities	Operating income (loss)	Net income (loss)	Comprehensive net income (loss)
KEXIM Bank UK Limited	₩ 477,191	₩ 430,374	₩ 1,743	₩ 1,868	₩ 1,738
KEXIM Vietnam Leasing Co.	148,797	132,277	342	212	952
PT.KOEXIM Mandiri Finance	190,187	162,354	1,675	1,387	992
KEXIM Asia Limited	449,771	386,103	1,397	1,167	3,491
Korea Asset Management Corporation	3,495,250	1,761,555	6,681	9,389	9,389
Credit Guarantee and Investment Fund	1,040,254	44,724	4,384	4,156	(3,494)
Korea Marine Guarantee Inc.	334,346	21,441	502	868	899
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	964,555	2,688,856	(21,999)	(72,467)	(72,479)
DAESUN Shipbuilding & Engineering Co., Ltd.	393,473	778,217	(797)	(3,712)	(3,712)
KTB Newlake Global Healthcare PEF	25,867	260	(433)	(433)	(433)
KBS-KDB Private Equity Fund	19,030	448	1,064	1,064	1,064
Korea Shipping and Maritime Transportation	974,082	127,253	12,770	(10,326)	(47,975)
Korea Aerospace Industries. Ltd.	3,756,688	2,719,285	74,260	59,000	59,032

(December 31, 2017)

Company	Assets	Liabilities	Operating income (loss)	Net income (loss)	Comprehensive net income (loss)
KEXIM Bank UK Limited	₩ 453,479	₩ 408,400	₩ 3,470	₩ 2,831	₩ (1,129)
KEXIM Vietnam Leasing Co.	144,783	129,216	1,786	1,599	(2,166)
PT.KOEXIM Mandiri Finance	176,436	149,077	2,769	2,397	(5,003)
KEXIM Asia Limited	423,166	362,989	3,452	3,094	(13,969)
Korea Asset Management Corporation	3,567,608	1,825,259	60,350	45,137	33,104
Credit Guarantee and Investment Fund	837,193	46,106	12,234	12,310	15,269
Korea Marine Guarantee Inc.	331,270	18,978	(849)	(1,863)	(1,785)
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,294,318	2,703,607	43,967	7,976	15,412
DAESUN Shipbuilding & Engineering Co., Ltd.	420,575	795,346	(10,398)	(143)	(143)
KTB Newlake Global Healthcare PEF	8,279	239	(671)	(671)	(671)
KBS-KDB Private Equity Fund	10,516	454	(915)	(915)	(915)
Korea Shipping and Maritime Transportation	764,796	2,767	27,646	(153,589)	(142,856)
Korea Aerospace Industries. Ltd.	3,166,223	2,025,818	(208,873)	(235,186)	(239,776)

12. TANGIBLE ASSETS:

Changes in tangible assets for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

Detail	Beginning balance	Acquisitions	Disposals	Depreciation	Ending balance
Lands	₩190,807	₩—	₩—	₩ —	₩190,807
Buildings	63,687	—	—	(1,347)	62,340
Vehicles	874	43	—	(254)	663
Furniture and fixture	13,097	843	(1)	(2,726)	11,213
Construction in progress	—	20	—	—	20
Total	₩268,465	₩906	₩ (1)	₩ (4,327)	₩265,043

(2017)

Detail	Beginning balance	Acquisitions	Disposals	Depreciation	Ending balance
Lands	₩190,807	₩ —	₩—	₩ —	₩190,807
Buildings	66,383	—	—	(2,696)	63,687
Vehicles	1,278	230	(41)	(593)	874
Furniture and fixture	14,669	4,084	(5)	(5,651)	13,097
Total	₩273,137	₩4,314	₩(46)	₩ (8,940)	₩268,465

13. **INTANGIBLE ASSETS:**

Changes in intangible assets for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

Detail	Beginning balance	Acquisitions	Disposals	Amortization	Impairment	Ending balance
Computer software	₩13,037	₩ 443	₩ —	₩ (1,788)	₩ —	₩11,692
System development fees	30,839	774	—	(4,651)	—	26,962
Memberships	3,746	—	(280)	—	—	3,466
Total	₩47,622	₩1,217	₩(280)	₩ (6,439)	₩ —	₩42,120

(2017)

Detail	Beginning balance	Acquisitions	Disposals	Amortization	Impairment	Ending balance
Computer software	₩12,400	₩ 3,939	₩ —	₩ (3,302)	₩ —	₩13,037
System development fees	26,066	10,690	—	(5,917)	—	30,839
Memberships	4,133	336	(506)	—	(217)	3,746
Total	₩42,599	₩14,965	₩(506)	₩ (9,219)	₩ (217)	₩47,622

14. **OTHER ASSETS:**

(1) Details of other assets as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Other financial assets :		
Guarantee deposits	₩ 38,958	₩ 38,153
Accounts receivable	547,106	238,046
Accrued income	849,179	825,800
Receivable spot exchange	34	63
Allowances for loan losses on other assets	(169,161)	(168,552)
Subtotal	1,266,116	933,510

	Jun. 30, 2018	Dec. 31, 2017
Other assets :		
Advance payments	23	1
Prepaid expenses	5,607	2,048
Current income tax asset	559	4,703
Sundry assets	11,796	10,269
Subtotal	17,985	17,021
Total	₩1,284,101	₩ 950,531

(2) Changes in allowances for loan losses on other assets for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	2017
Beginning balance(*1)	₩168,156	₩ 50,938
Write-off	—	—
Collection of written-off loans	1	15
Foreign exchange translation	—	(8)
Additional provisions	1,005	117,622
Others	(1)	(15)
Ending balance	₩169,161	₩168,552

(*1) The beginning balance was restated in accordance with K-IFRS No. 1109.

15. BORROWINGS:

(1) Details of borrowings as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Detail	Lender	Interest rate (%)	Amount
Borrowings in foreign currencies:			
Borrowings from the Government	MINISTRY OF STRATEGY AND FINANCE	LIBOR 3M+0.50 ~ LIBOR 3M+0.78	₩ 3,116,172
Long term borrowings from foreign financial institutions	CREDIT AGRICOLE CIB and others	LIBOR 3M+0.40 ~ LIBOR 3M+0.85	1,794,720
Discount on borrowings			(1,470)
Commercial papers	ING BANK N.V. AMSTERDAM and others	(-)0.33 ~ 2.54	1,229,535
Offshore commercial papers denominated in foreign currency	SOCIETE GENERALE, HONG KONG BR. and others	(-)0.36 ~ 2.33	240,817
Others (Foreign banks)	DBS BANK LTD, SINGAPORE BRANCH and others	0.00 ~ 0.03	200,006
Others (CSA)	ING BANK N.V. AMSTERDAM and others	—	21,694
Total			₩6,601,474

(December 31, 2017)

Detail	Lender	Interest rate (%)	Amount
Borrowings in foreign currencies:			
Borrowings from the Government	MINISTRY OF STRATEGY AND FINANCE	LIBOR 3M+0.50 ~ LIBOR 3M+0.78	₩2,976,435
Long term borrowings from foreign financial institutions	BANK OF AMERICA N.A and others	LIBOR 3M+0.40 ~ LIBOR 3M+0.85	2,678,500
Discount on borrowings			(2,224)
Commercial papers	BRED BANQUE POPULAIRE	(-)0.40	42,727
Offshore commercial papers denominated in foreign currency	BARCLAYS BANK PLC LONDON and others	(-)0.39 ~ 1.69	72,999
Others (Foreign banks)	DBS BANK LTD, SINGAPORE BRANCH and others	0.00 ~ 0.06	172,830
Others (CSA)	CITIBANK N.A., HONG KONG and others	—	72,190
Total			₩6,013,457

(2) Details of the borrowings from other financial institutions as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Type	Call-money	Borrowings in foreign currencies	Total
Commercial banks	₩—	₩3,485,302	₩3,485,302

(December 31, 2017)

Type	Call-money	Borrowings in foreign currencies	Total
Commercial banks	₩—	₩3,037,022	₩3,037,022

The above borrowings excluded the present value discounting effect.

16. DEBENTURES:

Details of debentures as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

Detail	Jun. 30, 2018 Interest rate (%)	Jun. 30, 2018 Amount	Dec. 31, 2017 Interest rate (%)	Dec. 31, 2017 Amount
Local currency:				
Floating rate	1.67 ~ 1.82	₩ 1,360,000	1.67 ~ 1.83	₩ 1,100,000
Fixed rate	1.48 ~ 4.70	13,050,000	1.35 ~ 4.70	13,020,000
Subtotal		14,410,000		14,120,000
Fair value hedging adjusting		(83,173)		(80,211)
Discount on debentures:		(73,631)		(78,861)
Subtotal		14,253,196		13,960,928
Foreign currencies:				
Floating rate	LIBOR+0.30 ~ LIBOR+1.00	8,951,785	LIBOR+0.30 ~ LIBOR +1.00	7,685,330
Fixed rate	0.16 ~ 9.32	42,001,648	0.17 ~ 9.32	39,253,997
Subtotal		50,953,433		46,939,327
Fair value hedging adjusting		(782,523)		(98,744)
Discount on debentures		(115,482)		(116,413)
Subtotal		50,055,428		46,724,170
Total		₩64,308,624		₩60,685,098

17. PROVISIONS:

(1) Details of provisions as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Provisions for acceptances and guarantees	₩453,763	₩509,038
Provisions for unused loan commitments	114,736	166,080
Total	₩568,499	₩675,118

(2) Changes in provisions for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

	Acceptances and guarantees			
	12 month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance(*1)	₩45,086	₩ 440,860	₩52,335	₩538,281
—Transfer to 12 month expected credit losses	1,142	(1,142)	—	—
—Transfer to lifetime expected credit losses	(15)	15	—	—
—Transfer to credit-impaired financial assets	(68)	(1,937)	2,005	—
Foreign exchange translation	1,503	11,340	638	13,481
Additional provisions (reversal of provision)	(3,923)	(101,994)	7,918	(97,999)
Ending balance	₩43,725	₩ 347,142	₩62,896	₩453,763

	Unused loan commitments			
	12 month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance(*1)	₩16,961	₩89,674	₩ 84,441	₩191,076
—Transfer to 12 month expected credit losses	101	(101)	—	—
—Transfer to lifetime expected credit losses	—	2	(2)	—
—Transfer to credit-impaired financial assets	(45)	(66)	111	—
Foreign exchange translation	251	424	7	682
Additional provisions (Reversal of provision)	4,928	5	(81,955)	(77,022)
Ending balance	₩22,196	₩89,938	₩ 2,602	₩114,736

(*1) The beginning balance was restated in accordance with K-IFRS No. 1109.

(2017)

Detail	Acceptances and guarantees: Individual assessment	Acceptances and guarantees: Collective assessment	Acceptances and guarantees: Subtotal	Unused loan commitments	Provision for others	Total
Beginning balance	₩ 403,504	₩1,004,406	₩1,407,910	₩ 228,839	₩ 15,198	₩1,651,947
Foreign exchange translation	(5,572)	(14,047)	(19,619)	(104)	—	(19,723)
Additional provisions (Reversal of provision)	(314,764)	(564,489)	(879,253)	(62,655)	1,344	(940,564)
Transfers in (out)	370,270	(370,270)	—	—	(14,818)	(14,818)
Payment	—	—	—	—	(1,724)	(1,724)
Ending balance	₩ 453,438	₩ 55,600	₩ 509,038	₩ 166,080	₩ —	₩ 675,118

18. RETIREMENT BENEFIT PLAN:

The Bank operates both defined benefit plan and defined contribution plan.

(1) Defined benefit plan

The Bank operates defined benefit plans, which have the following characteristics:

- The entity has the obligation to pay the agreed benefits to all its current and past employees.
- The entity is liable for actuarial risk (excess of actual payment against expected amount) and investment risk.

The present value of the defined benefit obligation recognized in the separate statements of financial position is calculated annually by independent actuaries in accordance with actuarial valuation method. The present value of the defined benefit obligation is calculated using the projected unit credit method (“PUC”). The data used in the PUC, such as interest rates, future salary increase rate, mortality rate, consumer price index and expected return on plan asset, are based on observable market data and historical data, which are annually updated.

Actuarial assumptions may differ from actual results due to change in the market, economic trend and mortality trend, which may affect defined benefit obligation liabilities and future payments. Actuarial gains and losses arising from changes in actuarial assumptions are recognized in the period incurred through other comprehensive income or loss.

(2) Details of defined benefit obligation as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Present value of defined benefit obligations	₩ 83,769	₩ 79,956
Fair value of plan assets	(91,441)	(92,183)
Defined benefit assets, net	₩ (7,672)	₩(12,227)

(3) Changes in net defined benefit obligations for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

	Present value of the defined benefit obligation	Plan assets	Net defined benefit obligation
Beginning balance	₩79,956	₩(92,183)	₩(12,227)
Contributions from the employer	—	—	—
Current service cost	4,657	—	4,657
Interest expense (income)	1,551	—	1,551
Return on plan assets, excluding the interest expense (income)	—	(1,792)	(1,792)
Actuarial gains and losses arising from changes in financial assumptions	—	—	—
Actuarial gains and losses arising from experience adjustments	—	—	—
Management fee on plan assets	—	—	—
Benefits paid	(2,395)	2,534	139
Ending balance	₩83,769	₩(91,441)	₩ (7,672)

(2017)

	Present value of the defined benefit obligation	Plan assets	Net defined benefit obligation
Beginning balance	₩72,105	₩(70,013)	₩ 2,092
Contributions from the employer	—	(27,100)	(27,100)
Current service cost	8,912	—	8,912
Interest expense (income)	2,612	(2,548)	64
Return on plan assets, excluding the interest expense (income)	—	1,258	1,258
Actuarial gains and losses arising from changes in financial assumptions	(3,081)	—	(3,081)
Actuarial gains and losses arising from experience adjustments	5,029	—	5,029
Management fee on plan assets	—	122	122
Benefits paid	(5,621)	6,098	477
Ending balance	₩79,956	₩(92,183)	₩(12,227)

(4) Details of plan assets as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Cash and cash equivalent	₩ 3	₩ 3
Debt securities	15,234	15,073
Others	76,204	77,107
Total	₩91,441	₩92,183

(5) Retirement benefit costs incurred from the defined contribution plan for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Retirement benefit cost	₩259	₩211

19. OTHER LIABILITIES:

Details of other liabilities as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Other financial liabilities:		
Financial guarantee contract liabilities	₩1,348,715	₩1,123,773
Foreign exchanges payable	343,861	213
Accounts payable	375,247	57,022
Accrued expenses	649,395	613,328
Guarantee deposit received	161	162
Subtotal	2,717,379	1,794,498
Other liabilities:		
Allowance for credit loss in derivatives	78,923	69,910
Unearned income	230,673	220,441
Sundry liabilities	4,890	4,101
Subtotal	314,486	294,452
Total	₩3,031,865	₩2,088,950

20. DERIVATIVES:

The Bank operates derivatives both for trading and hedging purposes. Derivatives held for trading purpose are included in financial assets and liabilities at FVTPL.

(1) Fair value hedge

Fair value hedge is a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized 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. When applying fair value hedge, the gain or loss on the hedged item attributable to the hedged risk shall adjust the carrying amount of the hedged item and be recognized in profit or loss.

The Bank shall discontinue prospectively the fair value hedge if the hedging instrument expires or is sold, terminated or exercised, the hedge no longer meets the criteria for hedge accounting or the Bank revokes the designation. Any adjustment arising from the gain or loss on the hedged item attributable to the hedged risk to the carrying amount of a hedged financial instrument for which the effective interest method is used shall be amortized to profit or loss.

The Bank uses interest rate swaps for hedging changes of fair values in hedged items arising from changes in interest rates. The Bank also uses currency swaps for hedging changes of fair values in hedged items arising from changes in foreign exchange rates

(2) Cash flow hedge

Cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and could affect profit or loss. When applying cash flow hedge, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge shall be recognized in other comprehensive income; and the ineffective portion of the gain or loss on the hedging instrument are recognized in profit or loss. If a hedge of a forecast transaction subsequently results in the recognition of a financial asset or a financial liability, the associated gains or losses that were recognized in other comprehensive income are reclassified from equity to profit or loss as a reclassification adjustment in the same period or periods during which the hedged forecast cash flows affect profit or loss.

The Bank shall discontinue prospectively the cash flow hedge if hedging instrument expires or is sold, terminated or exercised, the hedge no longer meets the criteria for hedge accounting or the Bank revokes the designation. The forecasted transaction is no longer expected to occur, any related cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income from the period when the hedge was effective are reclassified from equity to profit or loss as a reclassification adjustment.

The Bank uses interest rate swaps for hedging changes of cash flows in hedged items arising from changes in interest rates. The Bank also uses currency swaps for hedging changes of cash flows in hedged items arising from changes in foreign exchange.

(3) Details of derivative assets and liabilities as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

		Derivative assets			
Detail	Notional	Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩40,660,712	₩ 8,082	₩—	₩481,069	₩489,151
Currency:					
Currency forwards	7,087,364	—	—	89,023	89,023
Currency swaps	26,505,618	55,186	—	287,916	343,102
Subtotal	33,592,982	55,186	—	376,939	432,125
Others:					
Other derivatives	—	—	—	24	24
Total	₩74,253,694	₩63,268	₩—	₩858,032	₩921,300

		Derivative liabilities			
Detail	Notional	Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩40,660,712	₩ 728,434	₩—	₩ 490,066	₩1,218,500
Currency:					
Currency forwards	7,087,364	—	—	75,586	75,586
Currency swaps	26,505,618	1,046,985	—	446,638	1,493,623
Subtotal	33,592,982	1,046,985	—	522,224	1,569,209
Others:					
Other derivatives	—	—	—	18	18
Total	₩74,253,694	₩1,775,419	₩—	₩1,012,308	₩2,787,727

(December 31, 2017)

Detail	Notional	Derivative assets: Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩38,780,733	₩ 89,305	₩—	₩329,246	₩ 418,551
Currency:					
Currency forwards	6,451,057	—	—	113,466	113,466
Currency swaps	24,518,828	138,816	—	408,516	547,332
Subtotal	30,969,885	138,816	—	521,982	660,798
Stock:					
Stock options	2,298,275	—	—	1,444	1,444
Other:					
Other derivative	—	—	—	23	23
Total	₩72,048,893	₩228,121	₩—	₩852,695	₩1,080,816

Detail	Notional	Derivative liabilities: Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩38,780,733	₩ 369,290	₩—	₩311,850	₩ 681,140
Currency:					
Currency forwards	6,451,057	—	—	152,478	152,478
Currency swaps	24,518,828	688,906	—	447,433	1,136,339
Subtotal	30,969,885	688,906	—	599,911	1,288,817
Stock:					
Stock options	2,298,275	—	—	—	—
Other:					
Other derivative	—	—	—	17	17
Total	₩72,048,893	₩1,058,196	₩—	₩911,778	₩1,969,974

(4) Gains and losses from fair value hedging instruments and hedged items attributable to the hedged risk for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Fair value hedge—hedged items	₩ 683,778	₩(145,748)
Fair value hedge—hedging instruments	(1,005,560)	768,671

(5) The Bank recognized ₩(1,702) million and ₩(1,904) million as other comprehensive income (loss) (before tax effect) for the six months ended June 30, 2018 and 2017, and cash flow hedge ineffectiveness recognized in earnings was nil for the six months ended June 30, 2018 and 2017.

21. CAPITAL STOCK:

As of June 30, 2018, the authorized capital and paid-in capital of the Bank are ₩15,000,000 million and ₩11,814,963 million, respectively. The Bank does not issue share certificates.

Changes in capital stock for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	2017
Beginning balance	₩11,814,963	₩10,398,055
Paid-in capital increase and investment in kind	—	1,416,908
Ending balance	₩11,814,963	₩11,814,963

22. OTHER COMPONENTS OF EQUITY:

(1) Details of other components of equity as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Gain on valuation of AFS securities	₩ —	₩101,985
Gain on valuation of financial assets at FVOCI	377,185	—
Gain on disposal of financial assets at FVOCI	(27,194)	—
Gain on valuation of cash flow hedge	(790)	586
Remeasurement of net defined benefit obligation	17,168	17,168
Total	₩366,369	₩119,739

(2) Changes in other components for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

(Six months ended June 30, 2018)

	Beginning Balance(*1)	Increase (decrease)	Tax effect	Ending balance
Gain (loss) on valuation of financial assets at FVOCI	₩(114,032)	₩648,043	₩(156,826)	₩377,185
Loss on disposal of financial assets at FVOCI	(13,817)	(17,648)	4,271	(27,194)
Gain (loss) on valuation of cash flow hedge	586	(1,702)	326	(790)
Remeasurement of net defined benefit liability	17,168	—	—	17,168
Total	₩(110,095)	₩628,693	₩(152,229)	₩366,369

(*1) The beginning balance was restated in accordance with K-IFRS No. 1109.

(2017)

	Beginning balance	Increase (decrease)	Tax effect	Ending balance
Gain on valuation of AFS securities	₩259,564	₩(129,103)	₩ 9,707	₩140,168
Gain (loss) on valuation of cash flow hedge	854	(1,904)	461	(589)
Remeasurement of net defined benefit liability	19,599	—	—	19,599
Total	₩280,017	₩(131,007)	₩10,168	₩159,178

23. RETAINED EARNINGS:

(1) Details of retained earnings as of as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Legal reserve(*1)	₩ 346,135	₩328,856
Reserve for bad loan	302,248	206,330
Unappropriated retained earnings	430,126	172,794
Total	₩1,078,509	₩707,980

(*1) Pursuant to the EXIM Bank Act, the Bank appropriates 10% of separate net income for each accounting period as legal reserve, until the accumulated reserve equals to its paid-in capital.

(2) Changes in retained earnings for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	2017
Beginning balance(*1)	₩ 579,217	₩535,186
Net income for the period	558,888	172,794
Dividends	(59,596)	—
Ending balance	₩1,078,509	₩707,980

(*1) The beginning balance was restated in accordance with K-IFRS No. 1109.

(3) Reserve for bad loans

Reserve for bad loans is calculated and disclosed according to Article 29 (1) and (2), *Regulation on Supervision of Banking Business*. In accordance with Regulation on Supervision of Banking Business, etc., if the estimated allowance for credit loss determined by K-IFRS for the accounting purpose is lower than those for the regulatory purpose required by Regulation on Supervision of Banking Business, the Bank should reserve such difference as the regulatory reserve for bad loans. Due to the fact that regulatory reserve for bad loans is a voluntary reserve, the amounts that exceed the existing reserve for bad loans over the compulsory reserve for bad loans at the period-end date are reversed in profit. In case of accumulated deficit, the Bank should recommence setting aside reserve for bad loans at the time when accumulated deficit is reduced to zero.

1) Reserve for bad loans

Details of reserve for bad loans as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

	Jun. 30, 2018	Dec. 31, 2017
Accumulated reserve for bad loans	₩302,248	₩206,330
Expected reserve for bad loans	(55,500)	95,918
Reserve for bad loans	₩246,248	₩302,248

2) Regulatory reserve for bad loans and net income after adjusting reserve for bad loans.

Details of regulatory reserve for bad loans and net income after adjusting the reserve for six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Net income for the period	₩558,588	₩ 445,340
Regulatory reserve for bad loans	(12,122)	(224,203)
Net profit after adjusting the reserve for loan losses(*1)	₩546,466	₩ 221,137

(*1) Adjusted profit considering reserves for bad debt as above is calculated by assuming that the provision in reserves for bad debt before income tax is reflected in net income.

(4) Details of dividends for the six months ended June 30, 2018, and for the year ended December 31, 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
The Government	₩39,493	₩—
BOK	5,876	—
Korea Development Bank	14,227	—
Total	₩59,596	₩—

24. NET INTEREST INCOME:

Net interest income is the amount after deduction of interest expenses from interest income, and the details are as follows:

(1) Details of interest income for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Interest of due from financial institutions:		
Due from financial institutions in local currency	₩ 4,878	₩ 1,899
Due from financial institutions in foreign currencies	14,546	7,784
Subtotal	19,424	9,683
Interest of financial assets at FVTPL:		
Interest of trading securities	—	793
Interest of trading securities at FVTPL	667	—
Interest of loans at FVTPL	83	—
Subtotal	750	793
Interest of investments:		
Interest of AFS securities	—	8,823
Interest of securities at FVOCI	11,711	—
Interest of HTM securities	—	1,077
Interest of securities at amortized cost	503	—
Subtotal	12,214	9,900

	Six months ended June 30, 2018	Six months ended June 30, 2017
Interest of loans:		
Interest of loans in local currency	278,592	321,521
Interest of loans in foreign currencies	987,811	934,790
Interest of advance for customers	9,894	—
Interest of bills bought	384	11,878
Interest of call loans	21,108	10,557
Interest of interbank loans	5,106	877
Subtotal	1,302,895	1,279,623
Other interest income	609	2,694
Total	₩1,335,892	₩1,302,693

(2) Details of interest expenses for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Interest of borrowings:		
Borrowings in foreign currencies	₩ 74,623	₩ 75,127
Interest of call money	198	3,185
Interest of debentures:		
Interest of debentures in local currency	125,793	93,724
Interest of debentures in foreign currencies	689,166	605,755
Subtotal	814,959	699,479
Other interest income	4,410	7,149
Total	₩894,190	₩784,940

25. NET COMMISSION INCOME:

Net commission income is the amount after deduction of commission expenses from commission income, and the details are as follows.

(1) Details of commission income for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Commission income in local currency:		
Commission income on management of EDCF	₩ 8,088	₩ 7,692
Commission income on management of IKCF	1,135	1,138
Other commission income in local currency	6	—
Subtotal	9,229	8,830
Commission income in foreign currencies:		
Commission income on letter of credit	852	1,233
Commission income on confirmation on export letter of credit	176	428
Commission income on loan commitments	16,020	19,614
Management fee	—	—
Arrangement fee	1,115	5,938
Advisory fee	105	61
Cancellation fee	—	22
Prepayment fee	304	2,793
Sundry commission income on foreign exchange	54	77
Structuring fee	—	—
Brokerage fee for foreign currencies exchange funds	1,101	1,409
Other commission income in foreign currencies	596	3,116
Subtotal	20,323	34,691
Others:		
Other commission income	6,697	1,844
Guarantee fees in local currency:		
Guarantee fees in local currency	—	21,795
Guarantee fees in foreign currencies:		
Guarantee fees in foreign currencies	82,164	108,326
Premium for guarantee	36,352	30,006
Subtotal	118,516	138,332
Total	₩154,765	₩205,492

(2) Details of commission expenses for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Commission expenses in local currency:		
Commission expenses on domestic transaction	₩ 182	₩ 216
Commission expenses in foreign currencies:		
Service fees paid to credit-rating agency	675	1,580
Sundry commission expenses on foreign exchange	1,061	534
Sundry commissions expenses on offshore transaction	—	1
Subtotal	1,736	2,115
Others:		
Other commissions expenses	2,217	418
Total	₩4,135	₩2,749

26. DIVIDEND INCOME:

Details of dividend income for six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Financial assets at FVTPL	₩ 1,618	₩ —
AFS securities	—	33,184
Financial assets at FVOCI	33,772	—
Investments in associates	4,577	9,905
Total	₩39,967	₩43,089

27. GAIN (LOSS) ON FINANCIAL ASSETS AT FVTPL:

Details of gain (loss) on financial assets at FVTPL for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018
Securities at FVTPL:	
Gain on valuation	₩ 13,542
Loss on valuation	(2,722)
Gain on disposal	6,320
Loss on disposal	(427)
Others	302
Subtotal	17,015
Trading derivatives:	
Gain on valuation	514,440
Loss on valuation	(636,645)
Gain on transaction	296,613
Loss on transaction	(288,911)
Subtotal	(114,503)
Total	₩ (97,488)

	Six months ended June 30, 2017
Trading securities:	
Gain on valuation	₩ 1,876
Loss on valuation	(336)
Gain on disposal	7,427
Loss on disposal	(171)
Subtotal	8,796
Trading derivatives:	
Gain on valuation	606,120
Loss on valuation	(502,614)
Gain on transaction	247,240
Loss on transaction	(220,724)
Subtotal	130,022
Total	₩ 138,818

28. GAIN (LOSS) ON HEDGING DERIVATIVES:

Details of gain (loss) on hedging derivatives for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Gain on hedging derivatives	₩ 173,444	₩812,286
Loss on hedging derivatives	(1,179,004)	(43,615)
Total	₩(1,005,560)	₩768,671

29. GAIN (LOSS) ON FINANCIAL INVESTMENTS:

Details of gain (loss) on financial investments for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018
Financial assets at FVOCI:	
Gain on disposals	₩ 211
Loss on disposals	(1,674)
Total	₩(1,463)

	Six months ended June 30, 2017
AFS securities:	
Gain on disposals	₩18,929
Loss on disposals	(92)
Impairment loss	(3,298)
Total	₩15,539

30. OTHER OPERATING INCOME (EXPENSES):

Details of other operating income (expenses) for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Other operating income:		
Gains on sale of loans	₩ —	₩ 1,655
Gain on fair value hedged items	717,545	82,136
Others	313	6,396
Subtotal	717,858	90,187
Other operating expenses:		
Loss on fair value hedged items	33,767	227,884
Contribution to Credit Guarantee Fund and Technology Credit Guarantee Fund	2,391	2,641
Others	9,595	32,171
Subtotal	45,753	262,696
Total	₩672,105	₩(172,509)

31. IMPAIRMENT LOSS (RERVERSAL) ON CREDIT:

Details of impairment loss (reversal) on credit for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Loans at amortized cost	₩ 11,060	₩ 755,542
Other financial assets	1,006	3,629
Guarantees	(97,999)	(655,532)
Unused loan commitments	(77,022)	(6,897)
Financial guarantee contract	41,690	24,949
Financial assets at FVOCI	79	—
Financial assets at amortized cost	(7)	—
Total	₩(121,193)	₩ 121,691

32. GENERAL AND ADMINISTRATIVE EXPENSES:

Details of general and administrative expenses for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Detail	Six months ended June 30, 2018	Six months ended June 30, 2017
General and administrative	Short-term salaries	₩ 48,834	₩ 46,574
Other expenses in financing department	Office expenses	25,606	24,528
	Subtotal	74,440	71,102
Office expenses of EDCF		761	793
General and administrative	Postemployment benefit (defined contributions)	259	211
Others	Postemployment benefit (defined benefits)	4,416	4,488
	Depreciation of tangible assets	4,327	4,499
	Amortization of intangible assets	6,439	3,535
	Taxes and dues	11,966	16,219
	Subtotal	27,407	28,952
	Total	₩102,608	₩100,847

33. NON-OPERATING INCOME (EXPENSES):

Details of non-operating income (expenses) for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Detail	Six months ended June 30, 2018	Six months ended June 30, 2017
Gain(loss) on investments in associates and subsidiaries	Dividend income	₩ 4,577	₩9,905
	Impairment loss	—	(235)
	Subtotal	4,577	9,670
Others income	Gain on disposals of tangible assets	1	22
	Gain on disposals of intangible assets	100	—
	Rental income	80	78
	Damages paid for breach of contracts	2	2
	Interest on other loans	55	40
	Revenue on research project	15,680	22
	Other miscellaneous income	328	1,240
	Subtotal	16,246	1,404
Others expenses	Loss on disposal of tangible assets	1	1
	Impairment loss on intangible assets	—	19
	Expenses for contribution	1,985	2,460
	Court cost	2,153	1,166
	Expenses on research project	2,790	3,585
	Other miscellaneous expenses	26	1,055
	Subtotal	6,955	8,286
	Total	₩13,868	₩2,788

34. INCOME TAX EXPENSE (BENEFIT):

(1) Details of income tax expenses (benefit) for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Current income tax payable	₩ —	₩ —
Adjustment recognized in the period for current tax of prior periods	23,004	—
Changes in deferred income taxes due to temporary differences	297,492	126,767
Changes in deferred income taxes directly recognized in equity	(156,469)	10,132
Income tax expense	₩ 164,026	₩136,899

(2) Details of the reconciliation between net income before income tax and income tax expense (benefit) for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Net income (loss) before income tax	₩722,914	₩582,239
Income tax (benefit) calculated at statutory tax rate (11% up to ₩200 million, 22% over ₩200 million to ₩20 billion and 24.2% over ₩20 billion)	174,482	140,440
Adjustments:		
Effect on non-taxable income	(7,797)	(495)
Effect on non-deductible expense	3,831	324
Unrecognized temporary differences	—	57
Others	16,514	941
Subtotal	12,548	827
Adjustment recognized in the period for current tax of prior periods	(23,004)	(4,368)
Income tax expense	₩164,026	₩136,899
Effective tax rate from operations	22.69%	23.51%

35. STATEMENTS OF CASH FLOWS:

Details of significant noncash investing and financing transactions for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

	Six months ended June 30, 2018	Six months ended June 30, 2017
Loan-for-equity swap	₩(6,170)	₩ —
Gain (loss) on valuation of AFS securities	—	(157,514)
Contributed equity	—	1,416,907

36. CONTINGENT LIABILITIES AND COMMITMENTS:

(1) Details of contingent liabilities and commitments as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

Detail		Jun. 30, 2018	Dec. 31, 2017
Guarantees	Confirmed	₩36,350,655	₩38,960,799
	Unconfirmed	5,076,478	3,847,975
	Subtotal	41,427,133	42,808,774
Loan commitments	Local currency, foreign currency loan commitments	15,801,249	17,996,772
	Others	684,222	1,825,727
	Subtotal	16,485,471	19,822,499
	Total	₩57,912,604	₩62,631,273

(2) Details of guarantees that have been provided for others as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

Detail		Jun. 30, 2018	Dec. 31, 2017
Confirmed guarantees	Local currency:		
	Performance of contracts	₩ 62,534	₩ 50,709
	Repayment of advances	212,959	227,091
	Others	521,343	602,187
	Subtotal	796,836	879,987
	Foreign currency:		
	Performance of contracts	9,796,331	10,096,151
	Repayment of advances	8,287,710	11,091,318
	Acceptances of imported goods	2,170	3,277
	Acceptances of import letter of credit outstanding	91,165	89,480
	Foreign liabilities	11,502,357	10,964,999
	Others	5,874,086	5,835,587
	Subtotal	35,553,819	38,080,812
Unconfirmed guarantees	Foreign liabilities	1,598,913	1,569,782
	Repayment of advances	3,376,667	2,243,202
	Performance of contracts	—	33,793
	Underwriting of import credit	61,481	1,163
	Others	39,417	35
	Subtotal	5,076,478	6,063,975
	Total	₩41,427,133	₩42,808,774

(3) Details of guarantees classified by country as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Detail		Confirmed guarantees		Unconfirmed guarantees		Total	
		Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Asia	Korea	₩23,034,757	63,37	₩3,435,062	67.67	₩26,469,819	63.89
	Saudi Arabia	1,926,300	5.30	—	0.00	1,926,300	4.65
	India	578,345	1.59	45,790	0.90	624,135	1.51
	Indonesia	989,571	2.72	127,783	2.52	1,117,354	2.70
	Vietnam	1,058,517	2.91	230,834	4.55	1,289,351	3.11
	Australia	682,411	1.88	53,044	1.04	735,455	1.78
	Philippines	21,346	0.06	3,121	0.06	24,467	0.06
	Qatar	293,235	0.81	—	0.00	293,235	0.71
	Oman	358,104	0.99	56,399	1.11	414,503	1.00
	Others	1,068,717	2.94	55,620	1.10	1,124,337	2.71
	Subtotal	30,011,303	19.20	4,007,653	78.95	34,018,956	82.12
Europe	United Kingdom	423,780	1.17	—	0.00	423,780	1.02
	France	412,655	1.13	27,270	0.54	439,925	1.06
	Uzbekistan	303,387	0.83	39,382	0.78	342,769	0.83
	Others	547,338	1.50	473,401	9.31	1,020,739	2.46
	Subtotal	1,687,160	4.63	540,053	10.63	2,227,213	5.37
America	United States	2,168,243	5.96	90,399	1.78	2,258,642	5.45
	Brazil	425,054	1.17	—	0.00	425,054	1.03
	Mexico	270,267	0.74	2,034	0.04	272,301	0.66
	Bermuda	281,745	0.78	—	0.00	281,745	0.68
	Others	209,193	0.58	35,010	0.69	244,203	0.59
	Subtotal	3,354,502	9.23	127,443	2.51	3,481,945	8.41
Africa	Madagascar	166,772	0.46	—	0.00	166,772	0.40
	Marshall Islands	709,249	1.95	—	0.00	709,249	1.71
	Others	421,669	1.16	401,329	7.91	822,998	1.99
	Subtotal	1,297,690	3.57	401,329	7.91	1,699,019	4.10
	Total	₩36,350,655	100.00	₩5,076,478	100.00	₩41,427,133	100.00

(December 31, 2017)

Detail		Confirmed guarantees Amount	Ratio (%)	Unconfirmed guarantees Amount	Ratio (%)	Total Amount	Ratio (%)
Asia	Korea	₩26,140,921	67.10	₩2,197,447	57.11	₩28,338,368	66.20
	Saudi Arabia	1,914,178	4.91	—	—	1,914,178	4.47
	India	441,562	1.13	78,704	2.05	520,266	1.22
	Indonesia	970,827	2.49	122,053	3.17	1,092,880	2.55
	Vietnam	960,748	2.47	301,267	7.83	1,262,015	2.95
	Australia	697,324	1.79	50,666	1.32	747,990	1.75
	Philippines	126,536	0.32	8,614	0.22	135,150	0.32
	Qatar	290,789	0.75	—	—	290,789	0.68
	Oman	326,291	0.84	75,970	1.97	402,261	0.94
	Others	983,640	2.52	117,139	3.04	1,100,779	2.56
	Subtotal	32,852,816	84.32	2,951,860	76.71	35,804,676	83.64
Europe	United Kingdom	329,506	0.85	—	—	329,506	0.77
	France	394,781	1.01	52,095	1.35	446,876	1.04
	Uzbekistan	280,884	0.72	1,163	0.03	282,047	0.66
	Others	449,278	1.15	184,849	4.80	634,127	1.48
	Subtotal	1,454,449	3.73	238,107	6.18	1,692,556	3.95
America	United States	2,348,208	6.03	194,670	5.06	2,542,878	5.94
	Brazil	471,757	1.21	—	—	471,757	1.10
	Mexico	265,381	0.68	1,942	0.05	267,323	0.62
	Bermuda	191,686	0.49	—	—	191,686	0.45
	Others	281,531	0.72	33,958	0.88	315,489	0.74
	Subtotal	3,558,563	9.13	230,570	5.99	3,789,133	8.85
Africa	Madagascar	159,293	0.41	—	—	159,293	0.37
	Marshall Islands	568,553	1.46	—	—	568,553	1.33
	Others	367,125	0.95	427,438	11.12	794,563	1.86
	Subtotal	1,094,971	2.82	427,438	11.12	1,522,409	3.56
	Total	₩38,960,799	100.00	₩3,847,975	100.00	₩42,808,774	100.00

(4) Details of guarantees classified by industry as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Detail	Confirmed guarantees Amount	Ratio (%)	Unconfirmed guarantees Amount	Ratio (%)	Total Amount	Ratio (%)
Manufacturing	₩16,314,816	44.88	₩4,187,767	82.49	₩20,502,583	49.49
Transportation	2,074,175	5.71	31,571	0.62	2,105,746	5.08
Finance	2,053,208	5.65	39,382	0.78	2,092,590	5.05
Wholesale and retail	992,655	2.73	78,060	1.54	1,070,715	2.58
Property related business	372,080	1.02	58,048	1.14	430,128	1.04
Construction	8,718,035	23.98	330,446	6.51	9,048,481	21.84
Public and others	5,825,686	16.03	351,204	6.92	6,176,890	14.92
Total	₩36,350,655	100.00	₩5,076,478	100.00	₩41,427,133	100.00

(December 31, 2017)

Detail	Confirmed guarantees Amount	Ratio (%)	Unconfirmed guarantees Amount	Ratio (%)	Total Amount	Ratio (%)
Manufacturing	₩18,577,567	47.68	₩3,087,986	80.25	₩21,665,553	50.61
Transportation	1,850,655	4.75	56,203	1.46	1,906,858	4.45
Finance	2,051,157	5.26	1,163	0.03	2,052,320	4.79
Wholesale and retail	863,844	2.22	217,253	5.65	1,081,097	2.53
Property related business	353,741	0.91	59,345	1.54	413,086	0.96
Construction	9,251,902	23.75	22,135	0.58	9,274,037	21.67
Public and others	6,011,933	15.43	403,890	10.49	6,415,823	14.99
Total	₩38,960,799	100.00	₩3,847,975	100.00	₩42,808,774	100.00

(5) Global Medium-Term Note Program and CP programs

The Bank has been establishing the following programs regarding the issue of foreign currencies bonds and CPs:

1) Established on August 1, 1991, initially, and annually renewed, U.S. Shelf Registration to issue foreign bonds under the Securities and Exchange Commission rule of the United States of America with an issuance limit of USD 50 billion.

2) Established on May 14, 1997, and May 16, 1997, initially, and annually renewed, CP program to issue CPs with issuance limits of USD 6 billion and USD 2 billion, respectively.

3) Established on November 6, 1997, initially, and annually renewed, Euro Medium-Term Note Program to issue mid-to-long-term foreign currencies bonds with an issuance limit of USD 25 billion.

4) Established on February 2, 2008, initially, and renewed every year, MYR MTN program to issue Malaysian Ringgit-denoted bonds with issuance limits of MYR 4 billion.

5) Established in 1995, initially, and every other yearly renewed, Yen Shelf Registration to issue Samurai bond with an issuance limit of JPY 500 billion.

6) Established on May 31, 2010, Australian Domestic Debt Issuance Program to issue Kangaroo bond with limit of AUD 4 billion.

7) Established on January 17, 2011, and renewed every two years, Uridashi Shelf Registration to issue Uridashi bond with an issuance limit of JPY 500 billion.

(6) Litigations

As of June 30, 2018, 11 lawsuits (aggregated claim amount: ₩167,688 million) were filed as a plaintiff and 8 pending litigations as a defendant were filed (aggregated claim amount: ₩127,742 million). The Bank's management expects that there is no significant impact on the financial statements due to these lawsuits but it is possible to make additional loss to the Bank due to the results of future litigation.

(7) Written-off loans

The Bank manages written-off loans that have claims on debtors due to the statute of limitations, uncollected after write-off, etc. The written-off loans as of June 30, 2018, and December 31, 2017, are ₩2,034,384 million and ₩1,385,885 million, respectively.

37. TRANSACTIONS AND BALANCES WITH RELATED PARTIES:

Related parties consist of entities related to the Bank, postemployment benefits, a key management personnel and a close member of that person's family, an entity controlled or jointly controlled and an entity influenced significantly.

(1) Details of related parties as of June 30, 2018, are as follows:

Detail	Relationship	Ownership-percentage (%)
Parent:		
Korean government	Parent	66.27
Subsidiaries and Associates:		
KEXIM Bank UK Limited	Subsidiary	100.00
PT.KOEXIM Mandiri Finance	Subsidiary	85.00
KEXIM Vietnam Leasing Co.	Subsidiary	100.00
KEXIM Asia Limited	Subsidiary	100.00
Korea Asset Management Corporation	Associate	25.86
Credit Guarantee and Investment Fund	Associate	11.70
Korea Marine Guarantee Inc.	Associate	41.88
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	81.25
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	83.03
KTB Newlake Global Healthcare PEF	Associate	25.00
KBS-KDB Private Equity Fund	Associate	19.99
Korea Shipping and Maritime Transportation	Associate	40.00
Korea Aerospace Industries. Ltd.	Associate	26.41

(2) Significant balances of receivables, payables and guarantees with the related parties

1) Significant balances of receivables and payables with the related parties as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Detail	Receivables	Allowance /Provisions	Payables
Subsidiaries:			
KEXIM Bank UK Limited	₩ 120,171	₩ —	₩ 160
PT.KOEXIM Mandiri Finance	160,053	258	—
KEXIM Vietnam Leasing Co.	123,181	214	—
KEXIM Asia Limited	148,384	70	—
Subtotal	551,789	542	160
Associates:			
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,982,320	1,590,542	—
DAESUN Shipbuilding & Engineering Co., Ltd.	471,504	366,295	83,958
Subtotal	2,453,824	1,956,837	83,958
Total	₩3,005,613	₩1,957,379	₩84,118

(December 31, 2017)

Detail	Receivables	Allowance /Provisions	Payables
Subsidiaries:			
KEXIM Bank UK Limited	₩ 136,805	₩ —	₩ 93
PT.KOEXIM Mandiri Finance	145,109	227	—
KEXIM Vietnam Leasing Co.	122,994	195	—
KEXIM Asia Limited	121,267	58	59
Subtotal	526,175	480	152
Associates:			
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,931,974	1,590,951	—
DAESUN Shipbuilding & Engineering Co., Ltd.	459,156	284,443	41,743
Subtotal	2,391,130	1,875,394	41,743
Total	₩2,917,305	₩1,875,874	₩41,895

2) Guarantees provided to the related parties as of June 30, 2018, and December 31, 2017, are as follows (Korean won in millions):

(June 30, 2018)

Detail	Confirmed guarantees	Unconfirmed guarantees	Loans commitments	Other commitments
Subsidiaries:				
KEXIM Bank UK Limited	₩ —	₩ —	₩277,763	₩ 12,339
PT.KOEXIM Mandiri Finance	—	—	8,974	—
KEXIM Vietnam Leasing Co.	—	—	33,651	—
KEXIM Asia Limited	—	—	101,803	—
Subtotal	—	—	422,191	12,339
Associates:				
DAESUN Shipbuilding & Engineering Co., Ltd.	149,752	92,505	—	—
Subtotal	149,752	92,505	—	—
Total	₩149,752	₩92,505	₩422,191	₩ 12,339

(December 31, 2017)

Detail	Confirmed guarantees	Unconfirmed guarantees	Loans commitments	Other commitments
Subsidiaries:				
KEXIM Bank UK Limited	₩ —	₩ —	₩202,495	₩15,000
PT.KOEXIM Mandiri Finance	—	—	16,071	—
KEXIM Vietnam Leasing Co.	—	—	16,071	—
KEXIM Asia Limited	—	—	88,766	20,892
Subtotal	—	—	323,403	35,892
Associates:				
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	25,997	98,061	210,000	—
DAESUN Shipbuilding & Engineering Co., Ltd.	92,812	77,425	—	—
Subtotal	118,809	175,486	210,000	—
Total	₩118,809	₩175,486	₩533,403	₩35,892

(3) Profit and loss transactions with related parties

Profit and loss transactions with related parties for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

		Six months ended June 30, 2018			Six months ended June 30, 2017		
Detail	Related party	Revenue	Bad debt expenses	Expenses	Revenue	Bad debt expenses	Expenses
Subsidiaries	KEXIM Bank UK Limited	₩ 1,227	₩ —	₩232	₩ 1,047	₩ —	₩ 259
	PT.KOEXIM Mandiri Finance	1,721	18	—	1,048	—	—
	KEXIM Vietnam Leasing Co.	1,504	8	—	1,050	—	—
	KEXIM Asia Limited	1,301	12	13	1,088	—	96
Associate	SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	31,504	11,841	6	40,508	(82,776)	1,133
	DAESUN Shipbuilding & Engineering Co., Ltd	15,792	(339)	—	2,803	(48,578)	38
	Total	₩53,049	₩11,540	₩251	₩47,544	₩(131,354)	₩1,526

(4) Money dealing with related parties

Money dealing with related parties for six months ended June 30, 2018, and for the year ended December 31, 2017, is as follows (Korean won in millions):

	Six months ended June 30, 2017		2017	
	Financing transaction		Financing transaction	
Detail	Loan	Collection	Loan	Collection
Subsidiaries:				
KEXIM Bank UK Limited	₩110,040	₩131,734	₩ 240,458	₩ 231,744
PT.KOEXIM Mandiri Finance	152,756	145,172	297,385	275,019
KEXIM Vietnam Leasing Co.	116,265	121,844	209,031	214,802
KEXIM Asia Limited	147,574	131,958	320,952	315,549
Associates:				
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	24,345	465	34,000	216,503
DAESUN Shipbuilding & Engineering Co., Ltd.	—	—	99,450	—
Total	₩550,980	₩531,173	₩1,201,276	₩1,253,617

(5) Details of compensation for key executives for the six months ended June 30, 2018 and 2017, are as follows (Korean won in millions):

Detail	Six months ended June 30, 2018	Six months ended June 30, 2017
Salaries	₩1,137	₩949
Severance and retirement benefits	76	36
Total	₩1,213	₩985

38. THE ADOPTION OF K-IFRS No. 1109 'Financial Instruments':

The Bank has adopted K-IFRS No. 1109 'Financial Instruments' which was published on September 25, 2015 from the year beginning on January 1, 2018. The effect of the adoption of this new standard to the Bank's financial statements is as follows:

(1) Classification and measurement of financial assets

The impacts on the classification and measurements of the non-derivative financial instruments as of January 1, 2018 by application of this new standard were as follows (Korean won in millions):

	Classification under K-IFRS No.1039	Classification under K-IFRS No.1109	Amounts under K-IFRS No.1039(*)	Amounts under K-IFRS No.1109(*)
Due from banks:	Loans and receivables	Amortized cost	₩ 2,091,920	₩ 2,091,920
Loans:	Loans and receivables	FVPL	18,216	13,577
	Loans and receivables	FVOCI	1,095,968	866,319
	Loans and receivables	Amortized cost	70,371,948	70,371,948
Other financial assets	Loans and receivables	Amortized cost	1,102,062	1,102,062
Trading assets (debt securities)	FVTPL	FVPL	38,665	38,665
Trading assets (equity securities)	FVTPL	FVPL	725,613	725,613
AFS financial assets (debt securities)	AFS financial assets	FVOCI	911,518	911,518
AFS financial assets (equity securities)	AFS financial assets	FVPL	134,324	134,324
	AFS financial assets	FVOCI	5,646,636	5,646,636
HTM financial assets (debt securities)	HTM financial assets	Amortized cost	89,477	89,477
Total of the non-derivative financial instruments			₩82,226,347	₩81,992,059

(*) These are amounts before deduction of allowance for loan loss, and exclude loan valuation adjustment related to fair value hedging amounting to ₩24,182 million.

(2) Loss allowances impact

The impacts on loss allowances as of January 1, 2018 by application of this new standard were as follows (Korean won in millions):

Detail	Stages	Loans	Loss allowance under K-IFRS No.1039	Loss allowance under K-IFRS No.1109
Loans and receivables	Stage 1	₩ 64,646,271	₩ 209,161	₩ 228,664
	Stage 2	3,185,189	96,182	402,351
	Stage 3	4,099,725	2,840,651	2,840,893
	Reclassification	2,315,657	309,554	—
	Subtotal	74,246,842	3,455,548	3,471,908
Acceptances and guarantee contracts/ Commitments	Stage 1	48,995,311	744,674	757,402
	Stage 2	12,335,103	541,790	722,570
	Stage 3	1,216,148	512,427	512,440
	Subtotal	62,546,562	1,798,891	1,992,412
Debt securities	Stage 1	1,000,995	—	1,840
Total		₩137,794,399	₩5,254,439	₩5,466,160

(3) Changes in equity

Changes in retained earnings as of January 1, 2018 due to the initial application date of K-IFRS No.1109 were as follows (Korean won in millions):

	Amounts
Retained earnings at January 1, 2018 before changes	₩ 707,980
Adjustments of retained earnings due to the application of K-IFRS No.1109:	
Reclassification from financial assets at amortized cost to financial assets at FVTPL	120,064
Reclassification from available-for-sale financial assets to financial assets at FVTPL	(61,926)
Increase in loss allowance for financial assets at amortized cost	(30,705)
Increase in provisions for acceptances and guarantees	(29,244)
Increase in provisions for unused loan commitments	(166,116)
Increase in loss allowance for debt instruments at FVOCI	(2,342)
Others(*1)	397
Subtotal	(169,872)
Tax effect	41,109
Retained earnings at January 1, 2018 after changes	579,217

(*1) Others represent translation difference of foreign currencies, and others.

Changes in other components of equity of January 1, 2018 due to the initial application date of K-IFRS No.1109 were as follows (Korean won in millions):

	Amounts
Other components of equity at January 1, 2018 before changes	₩ 119,739
Adjustments of other components of equity due to the application of K-IFRS No.1109:	
Reclassification from financial assets at amortized cost to financial assets at FVOCI	(305,553)
Reclassification from available-for-sale financial assets to financial assets at FVOCI	2,342
Subtotal	(303,211)
Tax effect	73,377
Other components of equity at January 1, 2018 after changes	(110,095)

Independent Auditors' Report

The Board of Directors and Stockholder
The Export-Import Bank of Korea:

We have audited the accompanying separate financial statements of the Export-Import Bank of Korea (the "Bank"), which comprise the separate statement of financial position as of December 31, 2017, and the separate statements of comprehensive income, changes in equity and cash flows for the year ended December 31, 2017, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Separate Financial Statements

Management is responsible for the preparation and fair presentation of these separate financial statements in accordance with Korean International Financial Reporting Standards ("K-IFRS") and for such internal control as management determines is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an audit opinion on these separate financial statements based on our audit. We conducted our audit in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the separate financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the separate financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the separate financial statements 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. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the separate financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the separate financial statements present fairly, in all material respects, the financial position of the Export-Import Bank of Korea as of December 31, 2017, and its financial performance and its cash flows for the year then ended in accordance with K-IFRS.

Other matters

The accompanying statement of financial position of the Bank as of December 31, 2016, and the related statements of comprehensive loss, changes in equity and cash flows for the year then ended, were audited by Deloitte Anjin LLC whose report thereon dated March 29, 2017, expressed an unqualified opinion.

The procedures and practices utilized in the Republic of Korea to audit such separate financial statements may differ from those generally accepted and applied in other countries.

/s/ KPMG Samjong Accounting Corp.

KPMG Samjong Accounting Corp.
Seoul, Korea
March 30, 2018

This report is effective as of March 30, 2018, 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.

THE EXPORT-IMPORT BANK OF KOREA

SEPARATE STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2017 AND 2016

	Korean won	
	December 31, 2017	December 31, 2016
	(In millions)	
ASSETS:		
Cash and due from financial institutions (Notes 4, 5 and 7)	₩ 2,091,920	₩ 3,863,279
Financial assets at fair value through profit or loss (“FVTPL”) (Notes 4, 5, 8 and 20)	1,616,973	1,899,065
Hedging derivative assets (Notes 4, 5 and 20)	228,121	168,417
Loans (Notes 4, 5, 10 and 37)	68,223,320	73,418,788
Financial investments (Notes 4, 5 and 9)	6,781,955	7,138,785
Investments in associates and subsidiaries (Note 11)	2,598,607	766,084
Tangible assets, net (Note 12)	268,465	273,137
Intangible assets, net (Note 13)	47,622	42,599
Deferred tax assets (Note 34)	1,126,199	1,159,376
Retirement benefit assets, net (Note 18)	12,227	—
Other assets (Notes 4, 5, 14 and 37)	950,531	1,045,768
	₩83,945,940	₩89,775,298
LIABILITIES AND STOCKHOLDERS’ EQUITY		
LIABILITIES:		
Financial liabilities at FVTPL (Notes 4, 5 and 20)	₩ 911,778	₩ 852,699
Hedging derivative liabilities (Notes 4, 5 and 20)	1,058,196	2,335,530
Borrowings (Notes 4, 5 and 15)	6,013,457	9,761,389
Debentures (Notes 4, 5 and 16)	60,685,098	62,119,016
Provisions (Note 17)	675,118	1,651,947
Retirement benefit liabilities , net (Note 18)	—	2,092
Other liabilities (Notes 4, 5, 19 and 37)	2,088,950	1,832,644
	71,432,597	78,555,317
STOCKHOLDERS’ EQUITY:		
Capital stock (Note 21)	₩11,814,963	₩10,398,055
Additional paid-in capital	—	6,723
Capital adjustments	(129,339)	—
Other components of equity (Notes 20 and 22)	119,739	280,017
Retained earnings (Note 23) (Regulatory reserve for bad loans as of December 31, 2017 and 2016: ₩206,330 million and ₩476,882 million)	707,980	535,186
	12,513,343	11,219,981
	₩83,945,940	₩89,775,298

See accompanying notes to the separate financial statements.

THE EXPORT-IMPORT BANK OF KOREA

SEPARATE STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In millions)	
OPERATING INCOME(LOSS):		
Net interest income (Notes 24 and 37):		
Interest income	₩ 2,683,728	₩ 2,231,474
Interest expenses	(1,603,753)	(1,416,819)
	1,079,975	814,655
Net commission income (Notes 25 and 37):		
Commission income	401,102	456,708
Commission expenses	(9,373)	(8,448)
	391,729	448,260
Dividend income (Note 26)	35,352	23,060
Gain on financial assets at FVTPL (Note 27)	263,982	194,413
Gain (Loss) on hedging derivative assets (Notes 20 and 28)	1,208,274	(656,561)
Gain (Loss) on financial investments (Note 29)	16,143	(1,165)
Gain (Loss) on foreign exchange transaction	(1,528,844)	265,983
Other net operating income (expenses) (Note 30)	54,270	390,368
Impairment loss on credit (Note 31)	(1,080,828)	(3,233,679)
General and administrative expenses (Note 32)	(210,715)	(203,139)
Total operating income (loss)	229,338	(1,957,805)
NON OPERATING INCOME (EXPENSES) (Note 33):		
Net gain on investments in associates and subsidiaries	9,670	3,584
Net other non-operating expenses	(10,156)	(3,964)
	(486)	(380)
INCOME (LOSS) BEFORE INCOME TAX	228,852	(1,958,185)
INCOME TAX EXPENSE (BENEFIT) (Note 34)	56,058	(470,896)
NET INCOME (LOSS)	172,794	(1,487,289)
(Adjusted income (loss) after reserve for bad loans for the years ended December 31, 2017 and 2016: ₩595,796 million and ₩(2,040,195) million) (Note 23)		
OTHER COMPREHENSIVE INCOME (LOSS) FOR THE YEAR (Note 22)		
Items not reclassified subsequently to profit or loss:		
Remeasurements of net defined benefit liability	(3,207)	20,918
Income tax effect	776	(5,061)
	(2,431)	15,857
Items that are or maybe reclassified subsequently to profit or loss:		
Gain (Loss) on valuation on Available-For-Sale ("AFS") securities	(179,477)	188,914
Cash flow hedging gains or losses	(467)	1,298
Income tax effect	22,097	(46,032)
	(157,847)	144,180
TOTAL COMPREHENSIVE INCOME (LOSS)	₩ 12,516	₩(1,327,252)

See accompanying notes to the separate financial statements.

THE EXPORT-IMPORT BANK OF KOREA

SEPARATE STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

			Other components of equity				
	Capital stock	Additional paid-in capital (Capital adjustments)	Valuation on AFS securities	Cash flow Hedging gains or losses	Remeasurement elements of defined benefit plans	Retained earnings	Total
	(Korean won in millions)						
January 1, 2016	₩ 8,878,055	₩ —	₩ 116,369	₩(131)	₩ 3,742	₩ 2,027,863	₩11,025,898
Dividends						(5,388)	(5,388)
Paid-in capital increase	1,520,000	6,723					1,526,723
Total comprehensive loss							(1,327,252)
Net loss						(1,487,289)	(1,487,289)
Other comprehensive income:							160,037
Gain on valuation of AFS securities, net of tax			143,195				143,195
Gain on valuation of cash flow hedge, net of tax				985			985
Remeasurement elements of defined benefit plans, net of tax					15,857		15,857
December 31, 2016	₩10,398,055	₩ 6,723	₩ 259,564	₩ 854	₩19,599	₩ 535,186	₩11,219,981
January 1, 2017	₩10,398,055	₩ 6,723	₩ 259,564	₩ 854	₩19,599	₩ 535,186	₩11,219,981
Paid-in capital increase	1,416,908	(136,062)					1,280,846
Total comprehensive loss							12,516
Net income						172,794	172,794
Other comprehensive income:							(160,278)
Loss on valuation of AFS securities, net of tax			(157,579)				(157,579)
Loss on valuation of cash flow hedge, net of tax				(268)			(268)
Remeasurement elements of defined benefit plans, net of tax					(2,431)		(2,431)
December 31, 2017	₩11,814,963	₩(129,339)	₩ 101,985	₩ 586	₩17,168	₩ 707,980	₩12,513,343

See accompanying notes to the separate financial statements.

THE EXPORT-IMPORT BANK OF KOREA

SEPARATE STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

	Korean won	
	2017	2016
	(In millions)	
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	₩ 172,794	₩ (1,487,289)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Income tax expense (benefit)	56,058	(470,896)
Interest income	(2,683,728)	(2,231,474)
Interest expenses	1,603,753	1,416,819
Dividend income	(35,352)	(23,060)
Dividend received from subsidiaries and associates	(9,905)	(7,999)
Loss on financial assets held for trading	808	2,670
Loss on AFS financial assets	4,722	8,726
Transfer to derivatives' credit risk provision	41,204	68,062
Loss on debenture redemption	2,455	45
Loss on foreign exchange transactions	1,986,736	1,708,018
Impairment loss on credit	1,080,828	3,233,680
Impairment loss of investments in subsidiaries and associates	236	4,415
Loss on fair value hedged items	184,212	47,389
Depreciation and amortization	18,159	12,708
Loss on disposals of tangible, intangible and other assets	24	14
Impairment loss on tangible, intangible and other assets	217	538
Loss on valuation of derivative assets	1,054,473	1,389,192
Retirement benefits	9,098	12,390
Provision for others	1,344	16,317
Gain on financial assets held for trading	(5,046)	(25,378)
Gain on AFS financial assets	(20,865)	(7,561)
Reversal of derivatives' credit risk provision	(9,525)	(31,315)
Gain on foreign exchange transactions	(492,192)	(1,997,850)
Gain on fair value hedged items	(277,508)	(524,283)
Gain on valuation of derivative assets	(1,802,086)	(671,414)
Gain on disposals of tangible assets, intangible assets and other assets	(60)	(782)
Reversal of impairment loss on tangible, intangible and other assets	(50)	—
Changes in operating assets and liabilities:		
Due from financial institutions	1,032,475	(15,749)
Financial assets at FVTPL	481,539	(418,485)
Hedging derivative net assets	(733,261)	(855,891)
Loans	(1,854,328)	(7,037,664)
Other assets	(27,447)	(78,000)
Provisions	(910,287)	68,209
Payment of retirement benefits	(26,624)	(37,168)
Other liabilities	93,906	(151,993)
Other provisions	(1,724)	—
Payment (Refund) of income tax	(4,660)	3,845
Interest received	2,304,960	2,104,451
Interest paid	(1,395,738)	(1,220,613)
Dividend received	45,257	31,059
Net cash used in operating activities	(115,128)	(7,166,317)

(Continued)

THE EXPORT-IMPORT BANK OF KOREA

SEPARATE STATEMENTS OF CASH FLOWS (CONTINUED)
FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

	Korean won	
	2017	2016
	(In millions)	
CASH FLOWS FROM INVESTING ACTIVITIES:		
Disposals of AFS and HTM financial assets	₩ 912,204	₩ 462,608
Disposals of subsidiaries and associates	44	—
Disposals of tangible assets	101	1,356
Disposals of intangible assets	536	—
Acquisitions of AFS and HTM securities	(973,564)	(896,343)
Acquisitions of Investments in subsidiaries and associates	(365,283)	(91,174)
Acquisitions of tangible assets	(4,314)	(9,881)
Acquisitions of intangible assets	(14,965)	(19,651)
Net cash used in investing activities	(445,241)	(553,085)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Increase in call money	316	—
Proceeds from borrowings	4,915,469	8,698,157
Proceeds from debentures	24,094,658	26,128,039
Increase in guarantee deposits	—	4
Increase in capital stock	—	1,020,000
Decrease in call money	—	(207,952)
Repayment of borrowings	(7,655,267)	(10,841,478)
Repayment of debentures	(20,809,262)	(18,303,440)
Expense related to issuance of capital	(6,810)	—
Payment of dividends	—	(5,388)
Net cash provided by financing activities	539,104	6,487,942
NET DECREASE IN CASH AND CASH EQUIVALENTS	(21,265)	(1,231,460)
CASH AND CASH EQUIVALENTS, BEGINNING OF THE YEAR	1,354,694	2,455,307
EFFECTS OF FOREIGN EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(517,435)	130,847
CASH AND CASH EQUIVALENTS, END OF THE YEAR (Notes 7 and 35)	₩ 815,994	₩ 1,354,694

See accompanying notes to the separate financial statements.

THE EXPORT-IMPORT BANK OF KOREA

NOTES TO THE SEPARATE FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

1. GENERAL:

(1) Summary of the Export-Import Bank of Korea

The Export-Import Bank of Korea (the "Bank" or the "Company") was established in 1976 as a special financial institution under the Export-Import Bank of Korea Act (the "EXIM Bank Act") to grant financial facilities for overseas trade (i.e., export and import), investments and resources development activities. As of December 31, 2017, the Bank operates 10 domestic branches, 3 domestic offices, 4 overseas subsidiaries, and 24 overseas offices.

The Bank's authorized capital is ₩15,000,000 million, and through numerous capital increases since the establishment, its paid-in capital is ₩11,814,963 million as of December 31, 2017. The Government of the Republic of Korea (the "Government"), the Bank of Korea ("BOK"), and the Korea Development Bank hold 66.27%, 9.86%, and 23.87%, respectively, of the ownership of the Bank as of December 31, 2017.

The Bank, as a trustee of the Government, has managed the Economic Development Cooperation Fund ("EDCF") since June 1987 and the Inter-Korean Cooperation Fund ("IKCF") since March 1991. The funds are accounted for separately and are not included in the Bank's separate financial statements. The Bank receives fees from the Government for the trustee services.

(2) Summary of subsidiaries and associates

1) Subsidiaries of the Bank as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Subsidiaries	Location	Capital stock	Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
KEXIM Bank UK Limited	United Kingdom	GBP 20 mil.	Finance	20,000,000	100.00	Dec. 31, 2017
KEXIM Vietnam Leasing Co.(*)	Vietnam	USD 13 mil.	Finance	—	100.00	Dec. 31, 2017
PT.KOEXIM Mandiri Finance	Indonesia	IDR 52,000 mil.	Finance	442	85.00	Dec. 31, 2017
KEXIM Asia Limited	Hong Kong	USD 30 mil.	Finance	30,000,000	100.00	Dec. 31, 2017

(*) This entity does not issue share certificates.

(December 31, 2016)

Subsidiaries	Location	Capital stock	Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
KEXIM Bank UK Limited	United Kingdom	GBP 20 mil.	Finance	20,000,000	100.00	Dec. 31, 2016
KEXIM Vietnam Leasing Co.(*)	Vietnam	USD 13 mil.	Finance	—	100.00	Dec. 31, 2016
PT.KOEXIM Mandiri Finance	Indonesia	IDR 52,000 mil.	Finance	442	85.00	Dec. 31, 2016
KEXIM Asia Limited	Hong Kong	USD 30 mil.	Finance	30,000,000	100.00	Dec. 31, 2016

(*) This entity does not issue share certificates.

2) Associates of the Bank as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Associates	Location	Capital stock		Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
Korea Asset Management Corporation	Korea	KRW	860,000 mil.	Financial service	44,482,396	25.86	Dec. 31, 2017
Credit Guarantee and Investment Fund	Philippines	USD	700 mil.	Financial service	100,000,000	14.29	Sep. 30, 2017
Korea Marine Guarantee Incorporated Company	Korea	KRW	322,357 mil.	Financial service	135,000 mil	41.88	Dec. 31, 2017
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Korea	KRW	1,319,693 mil.	Shipbuilding	93,294,100	81.25	Sep. 30, 2017
DAESUN Shipbuilding & Engineering Co., Ltd.	Korea	KRW	7,730 mil.	Shipbuilding	1,040,000	67.30	Sep. 30, 2017
KTB Newlake Global Healthcare PEF	Korea	KRW	10,280 mil.	Financial service	257,000,000	25.00	Dec. 31, 2017
KBS-KDB Private Equity Fund	Korea	KRW	11,361 mil.	Financial service	2,366,875,000	20.83	Dec. 31, 2017
Korea Shipping and Maritime Transportation	Korea	KRW	904,884 mil.	Financial service	1,810,000	40.00	Dec. 31, 2017
Korea Aerospace Industries. Ltd.	Korea	KRW	487,376 mil.	Manufacturing	25,745,964	26.41	Dec. 31, 2017

(December 31, 2016)

Associates	Location	Capital stock		Main business	Number of shares owned	Percentage of ownership (%)	Financial statements as of
Korea Asset Management Corporation	Korea	KRW	860,000 mil.	Financial service	44,482,396	25.86	Dec. 31, 2016
Credit Guarantee and Investment Fund	Philippines	USD	700 mil.	Financial service	100,000,000	14.29	Sep. 30, 2016
Korea Marine Guarantee Incorporated Company	Korea	KRW	256,620 mil.	Financial service	26,999,999	52.63	Dec. 31, 2016
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Korea	KRW	1,319,376 mil.	Shipbuilding	93,294,100	70.71	Sep. 30, 2016
DAESUN Shipbuilding & Engineering Co., Ltd.	Korea	KRW	7,730 mil.	Shipbuilding	1,040,000	67.27	Sep. 30, 2016
EQP Global Energy Infrastructure PEF	Korea	KRW	1,235 mil.	Financial service	279,610,108	22.64	Dec. 31, 2016
KTB Newlake Global Healthcare PEF	Korea	KRW	4,610 mil.	Financial service	1,152,500,000	25.00	Dec. 31, 2016
KBS-KDB Private Equity Fund	Korea	KRW	2,406 mil.	Financial service	501,250,000	20.83	Dec. 31, 2016

2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES:

(1) Basis of Financial Statement Presentation

The Bank's separate financial statements are prepared under K-IFRS.

These financial statements are separate financial statements prepared in accordance with K-IFRS No.1027, 'Separate Financial Statements' presented by a parent, an investor with joint control of, or significant influence over, an investee, in which the investments are accounted for at cost.

The accompanying separate financial statements have been prepared on the historical cost basis except for certain non-current assets and financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is based on the fair values of the consideration given.

The principal accounting policies are set out below. Except for the effect of the Amendments to K-IFRSs and new interpretations set out below, the principal accounting policies used to prepare the financial statements as of and for the year ended December 31, 2017 are consistent with the accounting policies used to prepare the financial statements as of and for the year ended December 31, 2016.

- Amendments to K-IFRS No.1007—*Statement of Cash Flows*

These amendments are effective for annual periods beginning on or after January 1, 2017. An entity shall provide a classification of changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash flows. The adoption of the amendments has no significant impact on the bank's financial statements.

- Amendments to K-IFRS No.1012—*Income Taxes*

These amendments are effective for annual periods beginning on or after January 1, 2017. The amendments clarify the concept of temporary differences on unrealized gain and loss, in condition that debt instruments, which are measured on fair values, are under tax base amount. The adoption of the amendments had no significant impact on the Bank's financial statements.

(2) Functional Currency

The separate financial statements of the Bank are prepared in functional currency of the respective operation. 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.

(3) Significant Estimates and Judgments

The preparation of separate financial statements requires the application of accounting policies and certain critical accounting estimates and assumptions may have a significant impact on assets (liabilities) and income (expenses). The management's estimate may differ from the actual outcome if the management's estimate and assumption based on its best judgment at the reporting date are different from an actual environment.

Estimates and assumptions are continually evaluated and the 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, or the period of the change and future periods, if the change affects both.

1) Significant Estimates and Assumptions

Uncertainty in estimates and assumptions with significant risk that will result in material adjustment are as follows:

① Fair value of financial instruments

The fair value of financial instruments where no active market exists or where quoted prices are not otherwise available are determined by using valuation techniques. Financial instruments that are not actively traded in the market and with less transparent market price, will have less objective fair value and will require judgment in liquidity, concentration, uncertainty in market factors and assumption in price determination and other risks.

As described in the significant accounting policies 'Recognition and Measurement of Financial Instruments' diverse valuation techniques are used to determine the fair value of financial instruments, from general market accepted valuation model to internally developed valuation model that incorporates various types of assumptions and variables.

② Provision of credit losses (allowances for loan losses, provisions for acceptances and guarantees, financial guarantee contracts and unused loan commitments)

The Bank determines and recognizes allowances for loan losses through impairment testing and recognizes provisions for acceptances and guarantees, financial guarantee contracts and unused loan commitments. The amount of provisions of credit losses is determined by the methodology and assumptions used for estimating expected cash flows of the borrower for allowances on individual loans and collectively assessing allowances for groups of loans, guarantees and unused loan commitments.

③ Defined benefit obligation

The present value of defined benefit obligations is measured by the independent actuaries using projected unit credit method. It is determined by actuarial assumptions and variables such as future increases in salaries, rate of retirement, discount rate and others.

2) Critical judgments in applying the accounting policies

Critical judgments in applying the accounting policies that have significant impact on the amount recognized in the separate financial statements are as follows:

① Impairment of AFS equity investments

As described in the significant accounting policies in 'Impairment of Financial Assets', when there is significant or prolonged decline in the fair value of an investment in an equity instrument below its original cost, there is objective evidence that AFS equity investments are impaired.

Accordingly, the Bank considers the decline in the fair value of over 30% against the original cost as "significant decline" and a six-month continuous decline in the market price for marketable equity instrument as "prolonged decline".

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

(1) General

The significant accounting policies applied in the preparation of these separate financial statements after transition to K-IFRS are set out below.

(2) Foreign Currency

1) Foreign currency transactions

In preparing the separate financial statements of the Bank, transactions in currencies other than the Bank's functional currency (foreign currencies) are recorded by applying the rates of exchange at the dates of the transactions.

At the end of each reporting period foreign currency monetary items are translated using the closing rate which is the spot exchange rate at the end of the reporting period. Non-monetary items that are measured at fair value in a foreign currency are translated using the spot exchange rates at the date when the fair value was determined and non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the spot exchange rate at the date of the transaction. Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements are recognized in profit or loss in the period in which they arise. When gains or losses on a non-monetary item are recognized in other comprehensive income, any exchange component of those gains or losses are recognized in other comprehensive income. Conversely, when gains or losses on a non-monetary item are recognized in profit or loss, any exchange component of those gains or losses are recognized in profit or loss.

2) Foreign operations

The results and financial position of all foreign operations, whose functional currency differs from the Bank's presentation currency, are translated into the Bank's presentation currency using the following procedures;

Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position. Income and expenses for statement of comprehensive income presented are translated at average exchange rates for the period.

Any fair value adjustments to the carrying amounts of assets and liabilities arising from the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation. Thus they are expressed in the functional currency of the foreign operation and are translated into the presentation currency at the closing rate.

On the disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation, recognized in other comprehensive income and accumulated in the separate component of equity, are reclassified from equity to profit or loss (as a reclassification adjustment) when the gains or losses on disposal are recognized. On the partial disposal of a subsidiary that includes a foreign operation, the Bank reattributes the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income to the non-controlling interests in that foreign operation. In any other partial disposal of a foreign operation, the Bank reclassifies to profit or loss only the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income.

(3) Recognition and Measurement of Financial Instruments

1) Initial recognition

The Bank recognizes a financial asset or a financial liability in its separate statement of financial position when the Bank becomes a party to the contractual provisions of the instrument. A regular way purchase or sale of financial assets (a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by market regulation or practice) is recognized using trade date accounting.

The Bank classifies the financial assets as financial assets at FVTPL, HTM investments, AFS financial assets, loans, receivables and financial liabilities as financial liabilities at FVTPL and other financial liabilities as the nature and holding purpose of financial instrument at initial recognition in the purpose of financial reporting.

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 FVTPL, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability. The fair value of a financial instrument on initial recognition is normally the transaction price (that is, the fair value of the consideration given or received).

2) Subsequent measurement

After initial recognition, financial instruments are measured at one of the following based on classification at initial recognition.

① Amortized cost

The amortized cost of a financial asset or financial liability is the amount at which the financial asset or financial liability is measured at initial recognition and adjusted to reflect minus the principal repayments, plus or minus the cumulative amortization using the effective interest method (as defined below) and minus any reduction (directly or through the use of an allowances account) for impairment or bad debt expenses.

② Fair value

The Bank primarily uses fair values for the measurement of financial instruments. Fair values are the published price quotations in an active market and are based on the market prices or the dealer price quotations of financial instruments traded in an active market where available

A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

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. However for these more complex instruments, the Bank uses internally developed models, which are usually based on valuation methods and techniques generally recognized as standard within the industry, or the value measured by the 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 measure fair value on certain assumptions.

Also, the Bank classified measurements of fair value recognized in the financial statements into the following hierarchy.

- Level 1: Fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: Fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The fair value measurement is categorized in its entirety in the level of the lowest-level input that is significant to the entire measurement. For this purpose, input that is significant is estimated by the entire measurement.

On the other hand, the fair value hierarchy of foreign currency financial instruments is not affected by fluctuation of foreign exchange rate.

Unobservable inputs are used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for significant adjustments. In this situation, the measurement is regarded as Level 3.

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. These 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 accepted economic methodologies for pricing financial instruments. Periodically, the Bank calibrates the valuation technique and tests it for validity using prices from any observable current market transactions in the same instrument or based on any available observable market data.

3) Derecognition

Derecognition is the removal of a previously recognized financial asset or financial liability from the separate statement of financial position. The following is criteria for removal;

☐ 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 the financial assets have been neither transferred nor retained substantially all the risks, rewards of ownership and control. Therefore, if the Bank neither transfers nor retains 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.

☐ Derecognition of financial liabilities

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

4) Offsetting

Financial assets and financial liabilities are offset and the net amounts are presented in the separate statement of financial position when, and only when, the Bank currently has a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

(4) Cash and cash equivalents

Cash and cash equivalents include cash on hand, foreign currency, and highly liquid short term investments that are readily convertible to known amounts of cash, which are subject to an insignificant risk of changes in value.

(5) Financial assets at FVTPL

Financial assets are classified as at FVTPL when the financial asset is contingent consideration that may be paid by an acquirer as part of business combination to which K-IFRS No.1103 applies, the financial asset is classified as held for trading, or the financial asset is designated by the Bank as at FVTPL upon initial recognition.

A non-derivative financial asset is classified as held for trading if either

- It is acquired for the purpose of selling it in the near term, or
- It is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking

The Bank may designate certain financial assets, other than contingent consideration that may be paid by an acquirer as part of business combination to which K-IFRS No.1103 applies or held for trading, upon initial recognition as at FVTPL when one of the following conditions is met:

- It 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

- A group of financial assets is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided internally on that basis to the Bank's key management personnel.
- A contract contains one or more embedded derivatives may designate the entire hybrid (combined) contract as a financial asset at FVTPL if allowed according to K-IFRS No.1039, *'Financial Instruments: Recognition and measurement'*.

After initial recognition, a financial asset at FVTPL 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, dividend income, and gains or losses from sale and repayment from financial assets at FVTPL are recognized in the statement of comprehensive income as net gains on financial instruments at FVTPL.

(6) Financial Investments

AFS and HTM financial assets are presented as financial investments.

1) AFS financial assets

Profit or loss of financial assets classified as AFS, except for impairment loss and foreign exchange gains and losses, is recognized as other comprehensive income, and cumulative profit or loss is reclassified from equity to current profit or loss at the derecognition of financial asset and it is recognized as part of other operating profit or loss in the separate statements of comprehensive income.

However, interest income measured using effective interest rate is recognized in current profit or loss, and dividends of financial assets classified as AFS are recognized when the right to receive payment is established.

AFS financial assets denominated in foreign currencies are translated at the closing rate.

For such a financial asset, exchange differences resulting from changes in amortized cost are recognized in profit or loss as part of other operating income and expenses. For AFS equity instruments that are not monetary items for example, equity instruments, the gains or losses that are recognized in other comprehensive income includes any related foreign exchange component.

2) HTM financial assets

HTM financial assets are non-derivative financial assets with fixed or determinable payments and fixed maturity that the Bank's management has the positive intention and ability to hold to maturity. HTM financial assets are subsequently measured at amortized cost using the effective interest method after initial recognition and interest income is recognized using the effective interest rate.

(7) Loans

Non-derivative financial assets are classified as loans if these are not quoted in an active market and payments are fixed or determinable. After initial recognition, these are subsequently measured at amortized cost using the effective interest method.

(8) Impairment of financial assets

The Bank assesses at the end of each reporting period whether there is any objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred, if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a ‘loss event’) and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated. However, losses expected as a result of future events, no matter how likely, are not recognized.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured and recognized in profit or loss by category of financial assets.

1) Loans

If there is objective evidence that an impairment loss on loans carried at amortized cost has been incurred, the amount of the loss is measured as the difference between the loan’s carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the loan’s original effective interest rate. The Bank first assesses whether objective evidence of impairment exists individually for loans that are individually significant (individual evaluation of impairment), and individually or collectively for loans that are not individually significant.

If the Bank determines that no objective evidence of impairment exists for an individually assessed loan, whether significant or not, it includes the loan in a group of loans with similar credit risk characteristics and collectively assesses them for impairment (collective evaluation of impairment).

☐ Individual assessment of impairment

Individual assessment of impairment losses are calculated by discounting the expected future cash flows of a loan at its original effective interest rate and comparing the resultant present value with the loan’s current carrying amount. This process normally encompasses management’s best estimate, such as operating cash flow of borrower and fair value less cost to sell of any collateral held and the timing of anticipated receipts.

☐ Collective assessment of impairment

The methodology based on historical loss experience is used to estimate inherent incurred loss on groups of loans for collective evaluation of impairment. Such methodology incorporates factors such as type of product and borrowers, credit rating, portfolio size, loss emergence period, recovery period and applies probability of default (PD) on each loan (or pool of loans) and loss given default (LGD) by type of collateral. Also, consistent assumptions are applied to form a formula-based model in estimating inherent loss and to determine factors on the basis of historical loss experience and current condition. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

2) AFS financial assets

When a decline in the fair value of an AFS financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss (the difference between the acquisition cost and current fair value, less any impairment loss on that financial asset previously recognized in profit or loss) that had been recognized in other comprehensive income is reclassified from equity to profit or loss as part of other operating income and expenses.

If, in a subsequent period, the fair value of an AFS debt instrument classified as increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss is reversed, with the amount of the reversal recognized in profit or loss as part of other operating income and expenses. However, impairment losses recognized in profit or loss for an AFS equity instrument classified as available for sale are not reversed through profit or loss.

3) HTM financial assets

If there is objective evidence that an impairment loss on HTM financial assets carried at amortized cost has been incurred, the amount of the loss 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. Impairment loss of HTM financial assets is directly deducted from the carrying amount. The amount of the loss is recognized in profit or loss as part of other operating income and expenses. In case of financial asset classified as HTM, if, in a subsequent period, the amount of the impairment loss is decreased and objectively related to the event occurring after the impairment is recognized, the previously recognized impairment loss is reversed to the extent of amortized cost at the date of recovery. The amount of reversal is recognized in profit or loss as part of other operating income and expenses in the separate statement of comprehensive income.

(9) Derivatives

The Bank enters into numerous numbers of derivatives such as currency forward, interest rate swaps, currency swaps and others for trading purpose or to manage its exposures to fluctuations in interest rates and currency exchange and others. These derivatives are presented as financial assets and liabilities at FVTPL and derivatives for hedging in accordance with purpose and subsequent measurement.

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently measured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in net profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in such case the timing of the recognition in profit or loss depends on the nature of the hedge relationship. The Bank designates certain derivatives as hedging instruments to hedge the risk of changes in fair value of a recognized asset or liability or firm contracts (fair value hedge).

At the inception of the hedge there is formal designation and documentation of the hedging relationship and the Bank's risk management objective and strategy for undertaking the hedge. That documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item's fair value attributable to the hedged risk.

1) Derivative for trading

All derivatives, except for derivatives that are designated and qualify for hedge accounting are classified as financial instruments held for trading and measured at fair value. Gains or losses arising from a change in fair value are recognized in profit or loss as part of net gains on financial instruments at FVTPL.

2) Derivative financial instruments for hedging

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. The change in the fair value of the hedging instrument and the change in the hedged item attributable to the hedged risk are recognized in the line of the comprehensive income statement relating to the hedged item in the income statement.

Fair value hedge accounting is discontinued prospectively if the hedging instrument expires or is sold, terminated or exercised, or the hedge no longer meets the criteria for hedge accounting or the Bank revokes the designation. Once fair value hedge accounting is discontinued, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is fully amortized to profit or loss by the maturity of the financial instrument in the separate statements of comprehensive income.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss, and is recognized in the line of the separate statements of comprehensive income relating to the hedged item.

① Fair value hedge

Fair value hedge is a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized 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. When applying fair value hedge, the gain or loss on the hedged item attributable to the hedged risk shall adjust the carrying amount of the hedged item and be recognized in profit or loss.

The Bank shall discontinue prospectively the fair value hedge if the hedging instrument expires or is sold, terminated or exercised, the hedge no longer meets the criteria for hedge accounting or the Bank revokes the designation. Any adjustment arising from the gain or loss on the hedged item attributable to the hedged risk to the carrying amount of a hedged financial instrument for which the effective interest method is used shall be amortized to profit or loss.

The Bank uses interest rate swaps for hedging changes of fair values in hedged items arising from changes in interest rates. The Bank also uses currency swaps for hedging changes of fair values in hedged items arising from changes in foreign exchange rates

② Cash flow hedge

Cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and could affect profit or loss. When applying cash flow hedge, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge shall be recognized in other comprehensive income; and the ineffective portion of the gain or loss on the hedging instrument are recognized in profit or loss. If a hedge of a forecast transaction subsequently results in the recognition of a financial asset or a financial liability, the associated gains or losses that were recognized in other comprehensive income are reclassified from equity to profit or loss as a reclassification adjustment in the same period or periods during which the hedged forecast cash flows affect profit or loss.

The Bank shall discontinue prospectively the cash flow hedge if hedging instrument expires or is sold, terminated or exercised, the hedge no longer meets the criteria for hedge accounting or the Bank revokes the designation. The forecasted transaction is no longer expected to occur, any related cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income from the period when the hedge was effective are reclassified from equity to profit or loss as a reclassification adjustment.

The Bank uses interest rate swaps for hedging changes of cash flows in hedged items arising from changes in interest rates. The Bank also uses currency swaps for hedging changes of cash flows in hedged items arising from changes in foreign exchange.

3) Embedded derivatives

An embedded derivative is separated from the host contract and accounted for as a derivative if, and only if the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract and a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative and the hybrid (combined) instrument is not measured at fair value with changes in fair value recognized in profit or loss. Gains or losses arising from a change in the fair value of embedded derivative separated from host contract are recognized in profit or loss as part of net gains on financial instruments at FVTPL.

4) Day one profit and loss

If the Bank uses a valuation technique that incorporates data not obtained from observable markets for the fair value at initial recognition of financial instruments, there may be a difference between the transaction price and the amount determined using that valuation technique. In these circumstances, the fair value of financial instruments is recognized as the transaction price and the difference is amortized by using straight-line method over the life of the financial instruments. If the fair value of the financial instruments is determined using observable market inputs, the difference between the transaction price and amounts determined using observable markets inputs are recognized in the profit or loss.

(10) Tangible assets

1) Recognition and measurement

All property and equipment that qualify for recognition as an asset are measured at their cost and subsequently carried at their cost less any accumulated depreciation and any accumulated impairment losses.

The cost of property and equipment includes any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent expenditures are capitalized only when they prolong the useful life or enhance values of the assets but the costs of the day-to-day servicing of the assets such as repair and maintenance costs are recognized in profit or loss as incurred. If part of an item of an asset has a useful life different from that of the entire asset, it is recognized as a separate asset.

2) Depreciation

Land is not depreciated whereas other property and equipment are depreciated using the method that reflects the pattern in which the asset’s future economic benefits are expected to be consumed by the Bank. The depreciable amount of an asset is determined after deducting its residual value.

The depreciation method is straight-line and estimated useful lives of the assets are as follows.

Property and equipment	Estimated useful lives
Buildings and structures	10–60 years
Vehicles	4 years
Tools, furniture and fixtures	4–20 years

The residual value, the useful life and the depreciation method applied to an asset are reviewed at least at each financial year-end and, if expectations differ from previous estimates or if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the changes are accounted for as a change in an accounting estimate.

(11) Intangible assets

Intangible assets are measured initially at cost and subsequently carried at its cost less any accumulated amortization and any accumulated impairment losses.

Intangible assets are amortized using the straight-line method with no residual value over their estimated useful economic life since the assets are available for use.

Intangible assets	Estimated useful lives
Software	5 years
System development costs	5 years

The amortization period and the amortization method for intangible assets with a definite useful life are reviewed at least at each financial year-end. The useful life of an intangible asset that is not being amortized is reviewed each period to determine whether events and circumstances continue to support an indefinite useful life assessment for that asset. If there is any change, it is accounted for as a change in an accounting estimate.

(12) Impairment of non-financial assets

The Bank assesses at the end of each reporting period whether there is any indication that a non-financial asset, except for deferred tax assets, assets arising from employee benefits and non-current assets (or group of assets to be sold) classified as held for sale, may be impaired. If any such indication exists, the Bank estimates the recoverable amount of the asset. However, irrespective of whether there is any indication of impairment, the Bank tests goodwill acquired in a business combination, an intangible asset with an indefinite useful life and an intangible asset not yet available for use for impairment annually by comparing its carrying amount with its recoverable amount.

The recoverable amount is estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, the Bank determines the recoverable amount of the cash-generating unit to which the asset belongs (the asset's cash-generating unit).

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount and such impairment loss is recognized immediately in profit or loss.

(13) Financial liabilities at FVTPL

Financial liabilities at FVTPL include contingent consideration that may be paid by an acquirer as part of a business combination to which K-IFRS No.1103 applies, short-term financial liabilities and financial liabilities recognized as financial liabilities at FVTPL initially. Financial liabilities at FVTPL are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. Otherwise, the transaction cost is recognized in current profit or loss.

(14) Provisions

A provision is recognized if the Bank has a present obligation (legal or constructive) as a result of the past event and 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. The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision, and where the effect of the time value of money is material, the amount of a provision is the present value of the expenditures expected to be required to settle the obligation.

Provisions on confirmed and unconfirmed acceptances and guarantees, unfunded commitments of credit card and unused credit line of consumer and corporate loans are recognized using valuation model that applies the credit conversion factor, default rates, and loss given default. Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provisions are reversed.

(15) Financial guarantee contracts

A financial guarantee contract is a contract that requires 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 modified terms of a debt instrument.

Financial guarantee contracts are initially recognized at fair value and are amortized over the life of the contract. After initial recognition, financial guarantee contracts are measured at the greater of:

- The amount determined in accordance with K-IFRS No.1037, *‘Provisions, Contingent Liabilities and Contingent Assets’* and
- The initial amount recognized, less, when appropriate, cumulative amortization recognized in accordance with K-IFRS No.1018, *‘Revenue’*

(16) Equity and Reserve

Equity and Reserve are any contract or agreement that evidences a residual interest in the assets of an entity after deducting all of its liabilities

(17) Interest income and expenses

Interest income and expenses are recognized using the effective interest method. Effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability (or groups of financial assets or financial liabilities) and of allocating the interest income or interest expenses over the relevant period.

The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Bank estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. In those rare cases when it is not possible to estimate reliably the cash flows or the expected life of a financial instrument (or group of financial instruments), the Bank uses the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

Interest on impaired financial assets is recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

(18) Fee and commission income

The Bank recognizes financial service fee in accordance with the accounting standard of the financial instrument related to the fees earned.

1) Fees that are an integral part of the effective interest of a financial instrument

Such fees are generally treated as adjustments of effective interest. Such fees may include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, negotiating the terms of the instrument, preparing and processing documents and closing the transaction and origination fees received on issuing financial liabilities measured at amortized cost.

However, fees relating to the creation or acquisition of a financial asset at FVTPL are recognized as revenue immediately

2) Fees earned as services are provided

Such fees are recognized as revenue as the services are provided.

3) Fees that are earned on the execution of a significant act

Such fees are recognized as revenue when the significant act has been completed.

(19) Dividend income

Dividend income is recognized in profit or loss when the right to receive payment is established. Dividend income from financial assets at FVTPL and financial investment is recognized in profit or loss as part of dividend income in the separate statements of comprehensive income.

(20) Employee compensation and benefits

1) Defined contribution plans

When employees render service related to defined contribution plans, contributions related to employees services are recognized in current profit or loss without contributions included in cost of assets. Contributions which are supposed to be paid are recognized in accrued expenses after deducting any amount already paid. Also, if contributions already paid exceed contributions which would be paid at the end of period, the amount of excess is recognized in prepaid expenses.

2) Defined benefit plans

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan 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. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in OCI. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

3) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service.

Short-term employee benefits are recognized in current profit and loss when employees render the related service. Short-term employee benefits are not discounted.

(21) Income taxes

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

Current income tax is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period. The difference between the taxable profit and accounting profit may arise when income or expenses are included in accounting profit in one period, but is included in taxable profit in a different period, and if there is revenue that is exempt from taxation, expenses that are not deductible in determining taxable profit (tax loss). Current income tax liabilities (assets) for the current and prior periods are measured at the amount expected to be paid to (recovered from) the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The Bank offsets current income tax assets and current income tax liabilities if, and only if, the Bank has a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

2) Deferred tax

Deferred tax is recognized, using the asset-liability method, on temporary differences arising between the tax base amount of assets and liabilities and their carrying amount in the financial statements. Deferred tax liabilities are recognized for all taxable temporary differences and deferred tax assets are recognized for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized. However, deferred tax liabilities are not recognized if they arise from the initial recognition of goodwill; deferred tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax is provided on temporary differences arising on investments in subsidiaries, associates and joint ventures, except for deferred tax liabilities which the timing of the reversal of the temporary difference is controlled by the Bank and it is probable that the temporary difference will not reverse in the foreseeable future.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period. The Bank reduces the carrying amount of a deferred tax asset 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 the deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is 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 tax liabilities and deferred tax assets reflects the tax consequences 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 Bank offsets deferred tax assets and deferred tax liabilities when the Bank has a legally enforceable right to set off current tax assets against current tax liabilities; and the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity; or different taxable entity 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.

(22) New standards and interpretations not yet adopted

1) Amendments to K-IFRS No.1109—Financial Instruments

K-IFRS No.1109, published on September 25, 2015, is effective for annual periods beginning on or after January 1, 2018, with earlier application permitted. It replaces existing guidance in K-IFRS No.1039, *'Financial Instruments: Recognition and Measurement'*. The Bank plans to adopt K-IFRS No.1109 for the year beginning on January 1, 2018 and will recognize the accumulated effect resulting from initial application of K-IFRS No.1109 on the date of initial application, which is January 1, 2018.

Adoption of K-IFRS No. 1109 will generally be applied retrospectively, except for the following:

- Exemption allowing the Bank not to restate comparative information for prior periods with respect to classification and measurement (including impairment) changes; and
- Prospective application of new hedge accounting except for those specified in K-IFRS 1109 for retrospective application such as accounting for the time value of options.

The key features of the new standard, K-IFRS No.1109, are 1) classification and measurement of financial assets that reflects the business model in which the assets are managed and their cash flow characteristics, 2) impairment methodology that reflects 'expected credit loss' (ECL) model for financial assets, and 3) expanded scope of hedged items and hedging instruments which qualify for hedge accounting and changes in assessment method for effect of hedging relationships.

K-IFRS No.1109 will require the Bank to assess the financial impact from application of K-IFRS No.1109 and revise its accounting processes and internal controls related to financial instruments. Actual impact of adopting K-IFRS No.1109 will be dependent on the financial instruments the Bank holds and economic conditions at that time as well as accounting policy elections and judgment that it will make in the future.

For the application of K-IFRS No.1109, the Bank performed analysis and identified necessary modifications to internal controls and implemented change in accounting systems relating to financial instruments in 2017.

To assess financial impacts from application of K-IFRS No.1109, the Bank performed an impact analysis on the 2017 separate financial statements based on the situation and available information as of December 31, 2017. Expected financial impacts on the Bank's separate financial statements by the main topics of K-IFRS No.1109 were summarized as follows:

The financial analysis disclosed herein is subject to change depending on additional information that the Bank uses hereafter and related decision making.

☐ Classification and measurement of financial assets

When K-IFRS No.1109 is applied, the Bank will classify financial assets to be measured at amortized cost, fair value through other comprehensive income ("FVOCI") or fair value through profit or loss ("FVPL") on the basis of the Bank's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. If a hybrid contract contains a host that is a financial asset, the embedded derivatives shall not be separated from the host, and the hybrid contract as a whole shall be classified as a financial asset.

Business model	Contractual cash flows that are solely payments of principal and interests	All other cases
For collecting contractual cash flows	At amortized cost(*1)	At FVPL(*2)
For both collecting contractual cash flows and selling financial assets	At FVOCI(*1)	
For trading, and others	At FVPL	

(*1) The Bank may irrevocably designate a financial asset as at FVPL to eliminate or significantly reduce an accounting mismatch.
(*2) The Bank may irrevocably designate equity instruments that is not held for trading as at FVOCI.

As there are more stringent requirements for a financial asset to be classified as measured at amortized costs or FVOCI under K-IFRS No.1109 compared to the existing guidance in K-IFRS No.1039, the adoption of K-IFRS No.1109 would potentially increase the portion of financial assets that are measured at FVPL, which would also increase the volatility in the Bank's profit or loss.

Expected impacts on the classification and measurements of the non-derivative financial instruments as of December 31, 2017, based on the information from the revised accounting system were as follows (Korean won in millions):

	Classification under K-IFRS No.1039	Classification under K-IFRS No.1109	Amounts under K-IFRS No.1039(*)	Amounts under K-IFRS No.1109(*)
Due from banks	Loans and receivables	Amortized cost	₩ 2,091,920	₩ 2,091,920
Loans	Loans and receivables	FVPL	18,216	13,577
	Loans and receivables	FVOCI	1,095,968	866,319
	Loans and receivables	Amortized cost	70,371,948	70,371,948
Other financial assets	Loans and receivables	Amortized cost	1,102,062	1,102,062
Trading assets (debt securities)	FVTPL	FVPL	38,665	38,665
Trading assets (equity securities)	FVTPL	FVPL	725,613	725,613
AFS financial assets (debt securities)	AFS financial assets	FVOCI	911,518	911,518
AFS financial assets (equity securities)	AFS financial assets	FVPL	134,324	134,324
	AFS financial assets	FVOCI	5,646,636	5,646,636
HTM financial assets (debt securities)	HTM financial assets	Amortized cost	89,477	89,477
Total of the non-derivative financial instruments			₩82,226,347	₩81,992,059

(*) These are amounts before deduction of allowance for loan loss, and exclude loan valuation adjustment related to fair value hedging amounting to ₩24,182 million.

Based on the management's impact assessment to date, as of December 31, 2017, loans and receivables amounted to ₩ 18,216 million and AFS financial assets amounted to ₩ 134,324 million, previously measured at amortized cost, respectively, are expected to be classified as financial assets measured at FVPL upon adoption of K-IFRS No.1109 as of January 1, 2018. As a result, the portion of financial assets measured at FVPL in non-derivative financial assets is expected to increase from 0.93% under K-IFRS No.1039 as of December 31, 2017 to 1.13% under K-IFRS No.1109 as of January 1, 2018, which would increase the volatility in the Bank's profit or loss.

☐ Classification and measurement of financial liabilities

According to K-IFRS No.1109, changes in fair value of the financial liability designated as at FVPL that is attributable to changes in the credit risk shall be presented as other comprehensive income, not recognized in profit or loss. Amounts presented in other comprehensive income shall not be subsequently transferred to profit or loss. However, if recognizing the changes in fair value as other comprehensive income creates or enlarges accounting mismatch, the amounts shall be recognized as profit or loss.

As a portion of the change in fair value which has been recognized in profit or loss under the existing standard, K-IFRS No.1039, will be presented in other comprehensive income under K-IFRS No.1109, profit or loss related to valuation of financial liabilities is likely to decrease.

Based on the management's impact assessment to date, as of December 31, 2017, out of financial liability amounted to ₩ 78,450,674 million under K-IFRS No.1039, no financial liability was expected to be designated as at FVPL upon adoption of K-IFRS No.1109.

☐ Impairment: Financial assets and contract assets

In accordance with the existing standard K-IFRS No.1039, impairment is recognized only if evidence of impairment based on 'incurred loss model' is identified. In accordance with K-IFRS No.1109, the new accounting standard, impairment shall be recognized based on 'expected credit loss impairment model' for debt instruments, lease receivables, contract assets, loan commitments and financial guarantee contracts, which are measured at amortized cost or FVOCI.

According to K-IFRS No.1109, a loss allowance shall be measured at the amounts of 12 month expected credit losses or lifetime expected credit losses, by the three stages in the table below depending on the extent of significant increase in credit risk since initial recognition. Hence, an early recognition of credit risk may be available compared to the 'incurred loss model' in the existing standard K-IFRS No.1039.

Stages(*1)		Loss allowance
Stage 1	No significant increase in credit risk since initial recognition(*2)	12-Month Expected Credit Losses: the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on financial instruments that are possible within 12 months after the reporting date
Stage 2	Significant increase in credit risk since initial recognition	Lifetime Expected Credit Losses: the expected credit losses that result from all possible default events over the expected life of a financial instrument
Stage 3	Objective evidence of credit risk management	

(*1) In cases of trade receivable or contract assets in scope of K-IFRS No.1115 *'Revenue from Contracts with Customers'*, if there is no significant financing component in contracts with customers, loss allowance for such assets shall be measured at lifetime expected credit losses. If a significant financing component exists, entities can elect to measure the loss allowance for trade receivable or contract assets at lifetime expected credit losses. In cases of lease receivable, entities can elect to measure the loss allowance at lifetime expected credit losses as well.

(*2) If financial instruments have low credit risk at the end of the reporting period, it is also considered that credit risk of such instruments has not increased significantly since initial recognition.

According to K-IFRS No.1109, the Bank only recognizes the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for financial assets impaired at its initial recognition.

Based on the management's impact assessment to date, as of December 31, 2017, expected impacts on loss allowances based on information from the revised accounting system were as follows (Korean won in millions):

Detail	Stages	Loans	Loss allowance under K-IFRS No.1039	Loss allowance under K-IFRS No.1109
Loans and receivables	Stage 1	₩ 64,646,271	₩ 209,161	₩ 228,664
	Stage 2	3,185,189	96,182	402,351
	Stage 3	4,099,725	2,840,651	2,840,893
	Reclassification	2,315,657	309,554	—
	Subtotal	74,246,842	3,455,548	3,471,908
Acceptances and guarantee contracts/ Commitments	Stage 1	48,995,311	744,674	757,402
	Stage 2	12,335,103	541,790	722,570
	Stage 3	1,216,148	512,427	512,440
	Subtotal	62,546,562	1,798,891	1,992,412
Debt securities	Stage 1	1,000,995	—	1,840
Total		₩137,794,399	₩5,254,439	₩5,466,160

☐ Hedge accounting

Although the new standard K-IFRS No.1109 maintains 'Mechanics of hedging accounting'—fair value hedge, cash flow hedge and hedge of a net investment in a foreign operation—as defined in existing standard K-IFRS No.1039, the new standard replaces the complex and rule-based requirements for hedge accounting defined in existing standard K-IFRS No.1039 with a principle-based approach focusing an entity's risk management activities. As a result of the changes, scope of hedged items and hedging instruments are expanded and qualifying criteria for hedge accounting are eased by removing criteria for evaluation of hedge effectiveness and quantitative evaluation (80~125%).

When applying hedge accounting under K-IFRS No.1109, hedge accounting to certain transactions that do not meet the requirements for hedge accounting under the existing standard K-IFRS No.1039 may be applicable, and the volatility of the profit or loss may be reduced.

According to the transitional provisions for hedge accounting, when initially applying K-IFRS No.1109, the Bank may adopt as its accounting policy to continue to apply the hedge accounting requirements of the existing standard K-IFRS No.1039.

The Bank plans to apply hedge accounting for the transactions that meet the requirements for hedge accounting under K-IFRS No.1109. As of December 31, 2017, there was no applicable transaction for hedge accounting under K-IFRS No.1109 which do not meet the requirements for hedge accounting under the existing standard K-IFRS No.1039.

2) Amendments to K-IFRS No.1115—*Revenue from Contracts with Customers*

The core principle under K-IFRS No.1115 is that an entity should 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. The amendments introduces a five-step approach to revenue recognition and measurement: 1) Identify the contract with a customer, 2) Identify the performance obligations in the contract, 3) Determine the transaction price, 4) Allocate the transaction price to the performance obligations in the contract and, 5) Recognize revenue when (or as) the entity satisfies a performance obligation. This standard will supersede K-IFRS No.1011, '*Construction Contracts*', K-IFRS No.1018, '*Revenue*', K-IFRS No.2113, '*Customer Loyalty Programmes*', K-IFRS No.2115, '*Agreements for the Construction of Real Estate*', K-IFRS No.2118, '*Transfers of Assets from Customers*', and K-IFRS No.2031, '*Revenue-Barter Transactions Involving Advertising Services*'. The amendments are effective for annual periods beginning on or after January 1, 2018.

The Bank does not expect the application of K-IFRS No.1115 will have a significant impact on the separate financial statements.

3) Amendments to K-IFRS No.1116—Leases

K-IFRS No.1116 replaces existing standards, including K-IFRS No.1017, *'Leases'*, K-IFRS No.2104, *'Determining whether an Arrangement contains a Lease'*, K-IFRS No.2015, *'Operating Leases—Incentives'* and K-IFRS No.2027, *'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'*.

At inception of a contract, an entity shall assess whether the contract is, or contains, a lease. However, as a practical expedient, for the contracts previously identified as leases or not, an entity is not required to reassess whether the contract is, or contains, a lease at the date of initial application.

For a contract that is, or contains, a lease, a lessee or a lessor shall account for each lease component within the contract as a lease separately from non-lease components of the contract.

A lessee shall recognize a right-of-use asset, which indicates an asset that represents a lessee's right to use an underlying asset for the lease term, and a lease liability, which indicates obligation to make lease payments. However, a lessee may elect not to apply the requirements to short-term leases and leases for which the underlying asset is of low value. Also, as a practical expedient, a 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.

There has not been a material change in the accounting treatments for a lessor from the existing standard K-IFRS No.1017. K-IFRS No.1116 is effective for annual periods beginning on or after January 1, 2019, with earlier application permitted.

4. RISK MANAGEMENT:

4-1. Summary

(1) Overview of Risk Management Policy

The financial risks that the Bank is exposed to are credit risk, market risk, liquidity risk, operational risk, interest risk, credit concentration risk, strategy/reputational risk, outsourcing risk, settlement risk and others. Credit risk, market risk, liquidity risk, and operational risk have been recognized as the Bank's key risks.

The Bank's risk management system focuses on increasing transparency, developing risk management environment, and preemptive response to risks due to rapid changes in financial environment to support the Bank's long-term strategy and business decision efficiently.

The Note regarding financial risk management provides information about the risks that the Bank is exposed to, the objective, policies and process for managing the risk, the methods used to measure the risk, and capital adequacy. Additional quantitative information is disclosed throughout the separate financial statements.

(2) Risk Management Group

1) Risk Management Committee

The Risk Management Committee establishes risk management strategies in accordance with the directives of the Board of Directors and determines the Bank's target risk appetite, approves significant risk matters and reviews the level of risks that the Bank is exposed to and the appropriateness of the Bank's risk management operations as an ultimate decision-making authority.

2) Risk Management Council

The Risk Management Council is a consultative group which reviews and makes decisions on matters delegated by the Risk Management Committees and discusses the detailed issues relating to the Bank's risk management.

3) Risk Management Practices Committee

The Risk Management Practices Committee assists the Risk Management Committee and the Risk Management Council. It performs practical work relating to risk management plan, risk management strategy, risk measurement, risk analysis, economic capital limit and others.

4-2. Credit risk

(1) Overview of Credit Risk

Credit risk is the risk of possible losses in an asset portfolio in the events of counterparty's default, breach of contract and deterioration in the credit quality of the counterparty. For the risk management reporting purposes, the individual borrower's default risk, country risk, specific risks and other credit risk exposure components are considered as a whole.

(2) Credit Risk Management

The Bank controls the credit concentration risk exposure by applying and managing total exposure limits to prevent the excessive risk concentration to specific industry and specific borrowers. The Bank maintains allowances for loan losses associated with credit risk on loans and receivables to manage its credit risk.

The Bank recognizes impairment loss on loans with carrying amount at amortized cost when there is any objective indication of impairment. Under K-IFRS, impairment loss is based on losses incurred at the end of the reporting period and the Bank should not recognize expected losses that are probable due to future events. The Bank measures inherent incurred losses on financial assets classified as loans and receivables and present it in the separate financial statements through the use of an allowances account which is charged against the related financial assets.

(3) Maximum exposure to credit risk

The Bank's maximum exposure of financial instruments to credit risk as of December 31, 2017 and 2016 is as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Cash and due from financial institutions	₩ 2,091,920	₩ 3,863,279
Financial assets at FVTPL	891,360	688,542
Hedging derivative assets	228,121	168,417
Loans (*1)	71,486,133	76,297,126
Financial investments	1,000,995	1,049,016
Other financial assets	1,102,062	1,034,028
Acceptances and guarantee contracts	42,808,774	59,679,048
Commitments (*2)	19,737,788	20,209,143
	₩139,347,153	₩162,988,599

(*1) Loans exclude loans valuation adjusted related to fair value hedging.
(*2) Commitments exclude commitments on purchase of beneficiary certificates which are included in other commitments in Note 36.

(4) Credit risk of loans

The Bank maintains allowances for loan losses associated with credit risk on loans to manage its credit risk.

The Bank recognizes impairment loss on loans with carrying amount at amortized cost when there is any objective indication of impairment. Under K-IFRS, impairment loss is based on losses incurred at the end of the reporting period and the Bank should not recognize expected losses that are probable due to future events. The Bank measures inherent incurred losses on financial assets classified as loans and present them in the separate financial statements through the use of an allowances account which is charged against the related financial assets.

The Bank writes off on non-profitable loans, non-recoverable loans, loans classified as estimated loss by asset quality category, loans requested to be written off by Financial Supervisory Service ("FSS") and others upon approval of Loan Management Committee.

Loans are categorized as follows (Korean won in millions):

(December 31, 2017)

	Individual assessment	Collective assessment	Total	Ratio (%)
Loans:				
Normal				
Not past due	₩ 2,123,302	₩66,023,655	₩68,146,957	94.79
Past due	—	30	30	0.01
Impaired	3,610,399	126,860	3,737,259	5.20
Subtotal	5,733,701	66,150,545	71,884,246	100.00
Net deferred origination fees and costs:				
Normal				
Not past due	(37)	(396,944)	(396,981)	99.72
Past due	—	—	—	—
Impaired	(1,138)	6	(1,132)	0.28
Subtotal	(1,175)	(396,938)	(398,113)	100.00
Carrying amounts before deducting allowances:				
Normal				
Not past due	2,123,265	65,626,711	67,749,976	94.77
Past due	—	30	30	0.01
Impaired	3,609,261	126,866	3,736,127	5.22
Subtotal	5,732,526	65,753,607	71,486,133	100.00
Allowances:				
Normal				
Not past due	(368,644)	(254,029)	(622,673)	18.94
Percentage (%)	17.36	0.39	0.92	
Past due	—	(22)	(22)	0.01
Percentage (%)	—	73.33	73.33	
Impaired	(2,601,057)	(63,243)	(2,664,300)	81.05
Percentage (%)	72.07	49.85	71.31	
Subtotal	(2,969,701)	(317,294)	(3,286,995))	100.00
Percentage (%)	51.80	0.48	4.60	
Carrying amounts:				
Normal				
Not past due	1,754,621	65,372,682	67,127,303	98.43
Past due	—	8	8	0.01
Impaired	1,008,204	63,623	1,071,827	1.56
Total	₩ 2,762,825	₩65,436,313	₩68,199,138	100.00

(December 31, 2016)

	Individual assessment	Collective assessment	Total	Ratio (%)
Loans:				
Normal				
Not past due	₩ 241,823	₩69,339,999	₩69,581,822	90.68
Past due	—	653	653	0.01
Impaired	4,817,339	2,324,247	7,141,586	9.31
Subtotal	5,059,162	71,664,899	76,724,061	100.00
Net deferred origination fees and costs:				
Normal				
Not past due	(330)	(417,549)	(417,879)	97.88
Past due	—	—	—	—
Impaired	(9,097)	41	(9,056)	2.12
Subtotal	(9,427)	(417,508)	(426,935)	100.00
Carrying amounts before deducting allowances:				
Normal				
Not past due	241,493	68,922,450	69,163,943	90.65
Past due	—	653	653	0.01
Impaired	4,808,242	2,324,288	7,132,530	9.34
Subtotal	5,049,735	71,247,391	76,297,126	100.00
Allowances:				
Normal				
Not past due	(17,998)	(271,919)	(289,917)	9.91
Percentage (%)	7.44	0.39	0.42	
Past due	—	(12)	(12)	0.01
Percentage (%)	—	1.84	1.84	
Impaired	(2,210,717)	(425,089)	(2,635,806)	90.08
Percentage (%)	45.98	18.29	36.95	
Subtotal	(2,228,715)	(697,020)	(2,925,735)	100.00
Percentage (%)	44.14	0.98	3.83	
Carrying amounts:				
Normal				
Not past due	223,495	68,650,531	68,874,026	93.87
Past due	—	641	641	0.01
Impaired	2,597,525	1,899,199	4,496,724	6.12
Total	₩ 2,821,020	₩70,550,371	₩73,371,391	100.00

The above carrying amounts exclude loan valuation adjustment related to fair value hedging amounting to ₩24,182 million and ₩47,397 million, as of December 31, 2017 and 2016, respectively.

1) Credit quality of loans that are neither past due nor impaired

Credit quality of loans that are neither past due nor impaired as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans							
Criteria	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees and costs	Allowances	Carrying amount
Best	₩ 2,802,177	₩ 9,769,413	₩2,121,958	₩14,693,548	21.56	₩ (62,402)	₩ (9,752)	₩14,621,394
Outstanding	4,451,381	29,153,655	1,696,223	35,301,259	51.80	(318,151)	(72,261)	34,910,847
Good	6,485,730	7,888,486	1,226,780	15,600,996	22.90	(13,665)	(144,840)	15,442,491
Below normal	1,763,682	787,472	—	2,551,154	3.74	(2,763)	(395,820)	2,152,571
	₩15,502,970	₩47,599,026	₩5,044,961	₩68,146,957	100.00	₩(396,981)	₩(622,673)	₩67,127,303

(December 31, 2016)

	Loans							
Criteria	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees and costs	Allowances	Carrying amount
Best	₩ 924,617	₩ 6,333,727	₩1,131,151	₩ 8,389,495	12.06	₩ (27,901)	₩ (3,452)	₩ 8,358,142
Outstanding	5,397,037	37,044,358	2,423,723	44,865,118	64.48	(366,295)	(89,116)	44,409,707
Good	5,281,579	9,713,537	1,114,213	16,109,329	23.15	(23,141)	(181,360)	15,904,828
Below normal	56,897	160,983	—	217,880	0.31	(542)	(15,989)	201,349
	₩11,660,130	₩53,252,605	₩4,669,087	₩69,581,822	100.00	₩(417,879)	₩(289,917)	₩68,874,026

2) Aging analysis of loans that are past due but not impaired

Aging analysis of loans that are past due but not impaired as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans							
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees and costs	Allowances	Carrying amount
Within one months	₩ 30	₩—	₩—	₩ 30	100.00	₩—	₩(22)	₩ 8
Within two months	—	—	—	—	—	—	—	—
Within three months	—	—	—	—	—	—	—	—
Over three months	—	—	—	—	—	—	—	—
	₩ 30	₩—	₩—	₩ 30	100.00	₩—	₩(22)	₩ 8

(December 31, 2016)

	Loans					Deferred loan origination fees and costs	Allowances	Carrying amount
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)			
Within one months	₩—	₩653	₩—	₩653	100.00	₩—	₩(12)	₩641
Within two months	—	—	—	—	—	—	—	—
Within three months	—	—	—	—	—	—	—	—
Over three months	—	—	—	—	—	—	—	—
	₩—	₩653	₩—	₩653	100.00	₩—	₩(12)	₩641

3) Loans assessed for impairment on individual basis

Loans assessed for impairment on individual basis by country and industry of the Bank's counterparties as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans			Allowance			Allowance ratio (%)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Manufacturing	₩3,449,650	₩ 35,365	₩3,485,015	₩(2,484,785)	₩ (35,365)	₩(2,520,150)	72.03	100.00	72.31
Transportation	—	17,218	17,218	—	—	—	—	—	—
Construction	1,187	—	1,187	(1,187)	—	(1,187)	100.00	—	100.00
Public Sector & Others	—	105,841	105,841	—	(79,720)	(79,720)	—	75.32	75.32
	₩3,450,837	₩158,424	₩3,609,261	₩(2,485,972)	₩(115,085)	₩(2,601,057)	72.04	72.64	72.07

(December 31, 2016)

	Loans			Allowance			Allowance ratio (%)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Manufacturing	₩3,623,910	₩ 793,121	₩4,417,031	₩(1,732,272)	₩(324,327)	₩(2,056,599)	47.80	40.89	46.56
Transportation	—	390,023	390,023	—	(153,153)	(153,153)	—	39.27	39.27
Construction	1,188	—	1,188	(965)	—	(965)	81.23	—	81.23
	₩3,625,098	₩1,183,144	₩4,808,242	₩(1,733,237)	₩(477,480)	₩(2,210,717)	47.81	40.36	45.98

(5) Credit quality of securities (debt securities)

1) Securities (debt securities) exposed to credit risk as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Securities that are neither past due nor impaired	₩1,039,660	₩1,090,209

2) Credit quality of securities (debt securities) that are neither past due nor impaired as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Credit quality(*)					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Financial assets at FVTPL	₩ 38,665	₩—	₩—	₩—	₩—	₩ 38,665
AFS financial assets	911,518	—	—	—	—	911,518
HTM financial assets	89,477	—	—	—	—	89,477
	₩1,039,660	₩—	₩—	₩—	₩—	₩1,039,660

(December 31, 2016)

	Credit quality(*)					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Financial assets at FVTPL	₩ 41,193	₩—	₩—	₩—	₩—	₩ 41,193
AFS financial assets	937,682	—	—	—	—	937,682
HTM financial assets	111,334	—	—	—	—	111,334
	₩1,090,209	₩—	₩—	₩—	₩—	₩1,090,209

(*) Credit quality is classified based on internal credit quality grade as below.

	Credit rating
Grade 1	AAA ~ BBB
Grade 2	BBB- ~ BB
Grade 3	BB- ~ B
Grade 4	B- ~ C
Grade 5	D

(6) Concentration of credit risk

The amounts disclosed below exclude loan valuation adjustment related to fair value hedging amounting to ₩24,182 million and ₩47,397 million, as of December 31, 2017 and 2016, respectively.

1) Loans by country where the credit risk belongs to as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Asia:							
Korea	₩18,939,007	₩ 5,315,232	₩ 604,003	₩24,858,242	34.58	₩ (6,410)	₩(2,995,149)
China	—	1,833,920	311,601	2,145,521	2.98	(366)	(37,646)
Saudi Arabia	—	3,795,685	24,637	3,820,322	5.31	(52,670)	(8,303)
India	—	2,743,764	26,628	2,770,392	3.85	(22,580)	(4,003)
Indonesia	17,000	3,234,658	8,326	3,259,984	4.54	(70,546)	(10,627)
Vietnam	—	3,250,478	16,027	3,266,505	4.54	(22,466)	(20,972)
Australia	—	2,170,414	836	2,171,250	3.02	(19,996)	(4,234)
Philippines	—	245,572	—	245,572	0.34	(50)	(10,126)
Qatar	—	678,507	—	678,507	0.94	(2,832)	(2,302)
Singapore	—	163,068	75,507	238,575	0.33	(851)	(318)
Oman	—	975,651	10,707	986,358	1.37	(11,643)	(3,121)
Hong Kong	—	999,457	387,148	1,386,605	1.93	(2,383)	(2,491)
The United Arab Emirates	—	2,921,077	4,863	2,925,940	4.08	(27,197)	(6,928)
Others	—	2,296,222	3,168,744	5,464,966	7.61	(53,012)	(16,618)
Subtotal	18,956,007	30,623,705	4,639,027	54,218,739	75.42	(293,002)	(3,122,838)
Europe:							
Russia	—	362,699	—	362,699	0.50	(15)	(1,208)
United Kingdom	—	444,050	66,542	510,592	0.71	(1,469)	(433)
France	—	144,968	3,062	148,030	0.21	(2,188)	(83)
Netherlands	—	2,642	12,918	15,560	0.02	—	(44)
Malta	—	125,602	—	125,602	0.17	(1,211)	—
Uzbekistan	—	669,111	155,895	825,006	1.15	(6,263)	(4,770)
Greece	—	237,504	—	237,504	0.33	(1,327)	(114)
Turkey	—	659,824	2,802	662,626	0.92	(9,059)	(1,999)
Germany	—	281,095	402	281,497	0.39	(478)	(709)
Ukraine	—	119,102	—	119,102	0.17	(3,000)	(91)
Cyprus	—	232,689	—	232,689	0.32	(2,354)	—
Hungary	—	145,347	—	145,347	0.20	(1,095)	(5,433)
Others	—	568,424	99,041	667,465	0.94	(3,692)	(2,097)
Subtotal	—	3,993,057	340,662	4,333,719	6.03	(32,151)	(16,981)
America:							
Panama	—	1,215,278	—	1,215,278	1.69	(3,273)	(6,440)
United States	—	2,540,975	72,629	2,613,604	3.64	(7,733)	(80,463)
The British Virgin Islands	—	219,215	—	219,215	0.30	(2,363)	(47)
Mexico	—	834,136	—	834,136	1.16	(6,167)	(2,194)
Bermuda	—	819,398	—	819,398	1.14	(7,173)	(16,533)
Brazil	—	2,097,645	—	2,097,645	2.92	(5,589)	(4,117)
Others	—	1,426,809	3,299	1,430,108	1.99	(5,843)	(23,511)
Subtotal	—	9,153,456	75,928	9,229,384	12.84	(38,141)	(133,305)
Africa:							
Marshall Islands	—	1,903,658	—	1,903,658	2.65	(11,349)	(8,025)
Liberia	—	444,802	—	444,802	0.62	(3,344)	(666)
Madagascar	—	371,684	—	371,684	0.52	(1,832)	(1,200)
Others	—	1,382,260	—	1,382,260	1.92	(18,294)	(3,980)
Subtotal	—	4,102,404	—	4,102,404	5.71	(34,819)	(13,871)
Total	₩18,939,007	₩47,872,622	₩5,055,617	₩71,884,246	100.00	₩(398,113)	₩(3,286,995)

(December 31, 2016)

	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Asia:							
Korea	₩16,178,355	₩ 7,433,406	₩ 675,959	₩24,287,720	31.66	₩ (6,044)	₩(2,255,609)
China	—	2,147,381	536,056	2,683,437	3.50	(375)	(41,352)
Saudi Arabia	—	4,451,009	114,817	4,565,826	5.95	(57,984)	(8,827)
India	—	3,170,986	23,457	3,194,443	4.16	(40,039)	(4,729)
Indonesia	—	3,904,200	8,598	3,912,798	5.10	(75,269)	(12,155)
Vietnam	—	3,604,195	5,322	3,609,517	4.70	(24,334)	(19,593)
Australia	—	2,512,815	687	2,513,502	3.28	(22,004)	(5,088)
Philippines	—	396,781	119,642	516,423	0.67	(342)	(17,603)
Qatar	—	819,726	—	819,726	1.07	(3,108)	(2,696)
Singapore	—	565,149	859,666	1,424,815	1.86	(7,331)	(282,355)
Oman	—	1,015,439	499	1,015,938	1.32	(12,493)	(3,300)
Hong Kong	—	818,417	452,790	1,271,207	1.66	(2,011)	(2,383)
The United Arab Emirates	—	2,762,836	1,255	2,764,091	3.60	(31,206)	(6,773)
Others	—	1,960,112	1,472,634	3,432,746	4.47	(17,173)	(31,064)
Subtotal	16,178,355	35,562,452	4,271,382	56,012,189	73.00	(299,713)	(2,693,527)
Europe:							
Russia	—	300,311	—	300,311	0.39	(30)	(1,215)
United Kingdom	—	273,722	47,954	321,676	0.42	(1,788)	(529)
France	—	203,346	2,964	206,310	0.27	(3,323)	(56)
Netherlands	—	56,519	17,993	74,512	0.10	(58)	(72)
Malta	—	164,505	—	164,505	0.21	(1,578)	—
Uzbekistan	—	792,432	—	792,432	1.03	(6,755)	(3,605)
Greece	—	393,479	—	393,479	0.51	(2,546)	(161)
Ireland	—	483,400	—	483,400	0.63	(120)	(9,200)
Turkey	—	551,139	129	551,268	0.72	(8,749)	(1,912)
Germany	—	256,316	10,802	267,118	0.35	(639)	(854)
Ukraine	—	179,123	—	179,123	0.23	(5,439)	(3,955)
Cyprus	—	308,763	—	308,763	0.40	(2,901)	—
Hungary	—	188,796	981	189,777	0.25	(1,207)	(208)
Others	—	680,658	549,512	1,230,170	1.60	(4,664)	(1,733)
Subtotal	—	4,832,509	630,335	5,462,844	7.11	(39,797)	(23,500)
America:							
Panama	—	2,023,831	—	2,023,831	2.64	(7,066)	(165,235)
United States	—	2,511,557	114,805	2,626,362	3.42	(14,093)	(9,299)
The British Virgin Islands	—	556,399	—	556,399	0.73	(2,633)	(132)
Mexico	—	975,627	—	975,627	1.27	(6,773)	(2,361)
Bermuda	—	1,574,929	—	1,574,929	2.05	(11,823)	(1,571)
Brazil	—	2,310,664	—	2,310,664	3.01	(6,320)	(7,023)
Others	—	1,119,823	2,617	1,122,440	1.48	(5,800)	(4,214)
Subtotal	—	11,072,830	117,422	11,190,252	14.60	(54,508)	(189,835)
Africa:							
Marshall Islands	—	2,311,812	—	2,311,812	3.01	(13,978)	(13,869)
Liberia	—	553,247	—	553,247	0.72	(3,828)	(423)
Madagascar	—	419,247	—	419,247	0.55	(2,114)	(1,381)
Others	—	770,904	3,566	774,470	1.01	(12,997)	(3,200)
Subtotal	—	4,055,210	3,566	4,058,776	5.29	(32,917)	(18,873)
Total	₩16,178,355	₩55,523,001	₩5,022,705	₩76,724,061	100.00	₩(426,935)	₩(2,925,735)

2) Loans by industry as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans						
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Manufacturing	₩14,316,259	₩21,739,146	₩ 264,633	₩36,320,038	50.53	₩(163,359)	₩(3,090,742)
Transportation	273,905	6,663,808	—	6,937,713	9.65	(39,566)	(27,784)
Financial institutions	2,477,740	4,929,310	4,762,571	12,169,621	16.93	(5,451)	(17,960)
Wholesale and retail	691,117	1,212,952	25,590	1,929,659	2.68	(3,447)	(8,444)
Real estate	9,000	318,201	—	327,201	0.46	(1,917)	(801)
Construction	752,442	599,986	447	1,352,875	1.88	(588)	(9,790)
Public sector and others	435,545	12,409,218	2,376	12,847,139	17.87	(183,785)	(131,474)
Total	₩18,956,008	₩47,872,621	₩5,055,617	₩71,884,246	100.00	₩(398,113)	₩(3,286,995)

(December 31, 2016)

	Loans						
	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)	Deferred loan origination fees	Allowances
Manufacturing	₩12,877,156	₩26,376,000	₩ 682,688	₩39,935,844	52.05	₩(140,372)	₩(2,638,379)
Transportation	118,280	8,544,474	5,349	8,668,103	11.30	(54,707)	(193,863)
Financial institutions	1,083,455	5,029,908	4,247,297	10,360,660	13.50	(6,363)	(22,269)
Wholesale and retail	587,628	1,298,182	86,383	1,972,193	2.57	(3,686)	(6,897)
Real estate	14,000	479,473	—	493,473	0.64	(2,339)	(351)
Construction	914,316	556,976	447	1,471,739	1.92	(501)	(9,079)
Public sector and others	583,520	13,237,988	541	13,822,049	18.02	(218,967)	(54,897)
Total	₩16,178,355	₩55,523,001	₩5,022,705	₩76,724,061	100.00	₩(426,935)	₩(2,925,735)

3) Concentration of credit risk of securities (debt securities) by industry as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017		Dec. 31, 2016	
	Amount	Ratio (%)	Amount	Ratio (%)
Financial Assets at FVTPL				
Government and government sponsored institutions	₩ —	—	₩ 1	0.01
Banking and insurance	12,729	32.92	18,431	44.74
Others	25,936	67.08	22,761	55.25
Subtotal	38,665	100.00	41,193	100.00
AFS financial assets				
Government and government sponsored institutions	165,117	18.11	57,881	6.17
Banking and insurance	370,859	40.69	521,069	55.57
Others	375,542	41.20	358,732	38.26
Subtotal	911,518	100.00	937,682	100.00

	Dec. 31, 2017		Dec. 31, 2016	
	Amount	Ratio (%)	Amount	Ratio (%)
HTM financial assets				
Government and government sponsored institutions	5,356	5.98	12,107	10.87
Banking and insurance	61,076	68.26	63,995	57.48
Others	23,045	25.76	35,232	31.65
Subtotal	89,477	100.00	111,334	100.00
Total	₩1,039,660		₩1,090,209	

4) Concentration of credit risk of securities (debt securities) by country as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017		Dec. 31, 2016	
	Amount	Ratio (%)	Amount	Ratio (%)
Financial assets at FVTPL				
United States	24,895	64.39	14,805	35.94
Others	13,770	35.61	26,388	64.06
Subtotal	38,665	100.00	41,193	100.00
AFS financial assets				
Korea	323,725	35.51	490,004	52.26
United States	427,449	46.89	312,020	33.28
Others	160,334	17.60	135,658	14.46
Subtotal	911,518	100.00	937,682	100.00
HTM financial assets				
Korea	28,616	31.98	30,305	27.22
China	27,912	31.19	19,435	17.46
Others	32,949	36.83	61,594	55.32
Subtotal	89,477	100.00	111,334	100.00
Total	₩1,039,660		₩1,090,209	

5) Credit enhancement and its financial effect as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Loans(*)	Acceptances and guarantees	Unused loan commitments	Total	Ratio (%)
Maximum exposure to credit risk	₩71,486,133	₩42,808,774	₩19,737,788	₩134,032,695	100.00
Credit enhancement:					
Deposits and savings	93,112	93,168	7,840	194,120	0.15
Export guarantee insurance	—	884,694	1,806	886,500	0.66
Guarantee	3,851,033	1,902,263	1,381,731	7,135,027	5.32
Securities	149,004	410,282	17,450	576,736	0.43
Real estate	1,720,631	1,146,484	432,126	3,299,241	2.46
Ships	859,813	205,874	9,643	1,075,330	0.80
Others	1,515,638	23,402	9,838	1,548,878	1.16
Subtotal	8,189,231	4,666,167	1,860,434	14,715,832	10.98
Exposure to credit risk after deducting credit enhancement	₩63,296,902	₩38,142,607	₩17,877,354	₩119,316,863	89.02

(*) Loans exclude loans valuation adjusted related to fair value hedging.

(December 31, 2016)

	Loans(*)	Acceptances and guarantees	Unused loan commitments	Total	Ratio (%)
Maximum exposure to credit risk	₩76,297,126	₩59,679,048	₩20,209,143	₩156,185,317	100.00
Credit enhancement:					
Deposits and savings	69,923	153,399	6,399	229,721	0.15
Export guarantee insurance	83,570	1,426,227	—	1,509,797	0.97
Guarantee	3,534,868	1,609,041	1,946,773	7,090,682	4.54
Securities	102,084	462,146	3,188	567,418	0.36
Real estate	1,606,953	1,026,476	162,671	2,796,100	1.79
Ships	964,495	142,389	61,996	1,168,880	0.75
Others	1,710,137	—	9,207	1,719,344	1.10
Subtotal	8,072,030	4,819,678	2,190,234	15,081,942	9.66
Exposure to credit risk after deducting credit enhancement	₩68,225,096	₩54,859,370	₩18,018,909	₩141,103,375	90.34

(*) Loans exclude loans valuation adjusted related to fair value hedging.

4-3. Liquidity risk

(1) Overview of liquidity risk

Liquidity risk is the risk that the Bank is unable to meet its payment obligations arising from financial liabilities as they become due. The Bank discloses all financial asset, financial liabilities and off-balance-sheet items, such as loan commitments and analysis of the contractual maturity, which are related to liquidity risk, into seven categories. The cash flows disclosed in the maturity analysis are undiscounted contractual amounts, including principal and future interest, which resulted in disagreement with the discounted cash flows included in the separate statements of financial position. However, for derivatives, each discounted cash flow consisting of current fair value is presented.

(2) Principles of the liquidity risk management

1) Liquidity risk is managed with integration. The Bank measures, reports and controls liquidity risk by quantification with reasonable method.

2) Liquidity risk reflects financing plans and fund-using plans, and the Bank reports the liquidity risk with preciseness, timeliness and consistency.

3) The Bank establishes liquidity risk management strategy by analyzing liquidity maturity, liquidity gap structure and market environment.

(3) Liquidity risk management

Risk management department monitors changes by liquidity risk sources and compliance of risk limits. It notifies related departments to prepare countermeasures in case the measured liquidity risk is close to risk limits. Also, it analyzes crisis situations and effects of the crisis situations and reports to the Risk Management Committee on a regular basis. Each related department monitors changes of liquidity risk sources and compliance of risk limits by itself and if exposure to new risk is expected, it discusses the matter with the head of risk management department.

(4) Measurement of liquidity risk

The Bank measures liquidity ratio, liquidity gap ratio and others for local currency and foreign currencies and simulates analysis reflecting market environment, product features and the Bank’s strategies.

(5) Analysis on remaining contractual maturity of financial liabilities and off-balance sheet items

Remaining contractual maturity and amount of financial liabilities and off-balance sheet items as of December 31, 2017 and 2016 is as follows (Korean won in millions):

(December 31, 2017)

	On demand	Within 1 month	1 to 3 months	3 to 6 Months	6 to 12 months	1 year to 5 years	Over 5 years	Total
Financial liabilities:								
Financial liabilities at FVTPL	₩ 911,778	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 911,778
Hedging derivative liabilities	—	206	57,322	91,587	45,610	449,538	413,933	1,058,196
Borrowings	—	216,013	15,770	1,139,708	424,604	3,936,528	575,566	6,308,189
Debentures	—	912,759	3,000,853	5,332,189	9,803,980	31,884,629	17,443,603	68,378,013
Other financial liabilities	—	985,367	—	—	65,689	34,810	708,632	1,794,498
	₩ 911,778	₩2,114,345	₩3,073,945	₩6,563,484	₩10,339,883	₩36,305,505	₩19,141,734	₩78,450,674
Off-balance sheet items(*):								
Commitments	₩19,737,788	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩19,737,788
Financial guarantee contracts	14,493,065	—	—	—	—	—	—	14,493,065
	₩34,230,853	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩34,230,853

(*) Guarantees and loan commitments and other credit facilities provided by the Bank have maturities. However, if the counterparty requests the payment immediately, the payment must be fulfilled.

(December 31, 2016)

	On demand	Within 1 month	1 to 3 months	3 to 6 Months	6 to 12 months	1 year to 5 years	Over 5 years	Total
Financial liabilities:								
Financial liabilities at FVTPL	₩ 852,699	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 852,699
Hedging derivative liabilities	—	77,926	140,842	23,318	492,940	1,129,531	470,973	2,335,530
Borrowings	—	35,518	939,079	2,242,728	590,711	5,421,887	849,677	10,079,600
Debentures	—	3,314,357	4,216,493	3,650,867	8,342,283	32,336,081	17,993,116	69,853,197
Other financial liabilities	—	674,028	358	—	191,671	57,685	717,276	1,641,018
	₩ 852,699	₩4,101,829	₩5,296,772	₩5,916,913	₩9,617,605	₩38,945,184	₩20,031,042	₩84,762,044
Off-balance sheet items(*):								
Commitments	₩20,209,143	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩20,209,143
Financial guarantee contracts	15,663,910	—	—	—	—	—	—	15,663,910
	₩35,873,053	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩35,873,053

(*) Guarantees and loan commitments and other credit facilities provided by the Bank have maturities. However, if the counterparty requests the payment immediately, the payment must be fulfilled.

4-4. Market risk

(1) Overview of market risk

1) Definition of market risk

Market risk is the risk of possible losses that arise from the changes of market factors, such as interest rate, stock price, foreign exchange rate, commodity value and other market factors related to the fair value or future cash flows of the financial instruments. The Bank classifies exposures to market risk into either foreign exchange rate risk or interest rate risk. Foreign exchange risk means that possible losses on assets and liabilities denominated in foreign currencies due to changes of foreign exchange rate. Interest rate risk means that possible losses on assets and liabilities due to changes of interest rate.

2) Market risk management group

The Bank operates the Risk Management Committee and the Risk Management Council for managing risks and risk limits. The Risk Management Practices Committee assists the Risk Management Committee and the Risk Management Council for practical matters, such as managing adequate assets and liabilities by analyzing foreign exchange risk, interest rate risk, liquidity risk, money balance plan and effects by initiating new product. Market risk is managed by product and currency for minimizing segments exposed to changes of foreign exchange, interest rate and securities' price. Foreign exchange risk is measured by definite method and probabilistic method and definite method is used for limits management. Interest rate value at risk ("VaR") and interest rate earning at risk ("EaR") are measured by Bank for International Settlements ("BIS") standards, definite method and probabilistic method and definite method is used for limits management. Meanwhile, the Bank performs financial crisis analysis supposing exceptional, but possible events for evaluating latent weakness. The analysis is used for important decision making, such as risk mitigation, emergency plan development and limit setup. The results of the analysis are reported to the board of directors and management on a quarterly basis.

(2) Foreign exchange risk

1) Management of foreign exchange risk

Foreign exchange risk management limit is set up and included in internal capital management limit. A risk management division head monitors changes of foreign exchange risk by source and compliance of risk limits regularly. A finance division head also monitors changes of foreign exchange risk by source and compliance of risk limits. The finance division head needs to cooperate with the risk management division head in case it is expected that the Bank will be exposed to a new risk. The risk management division head orders related divisions to prepare countermeasures in case it is apprehended that foreign exchange risk exceeds risk limit. If foreign exchange risk exceeds the risk limit, the risk management division head orders related divisions to prepare countermeasures and reports to Risk Management Committee after resolving the exceeded limit problem.

2) Measurement of foreign exchange risk

Foreign exchange risk is managed by foreign exchange VaR and foreign exchange position. Foreign exchange VaR is measured on a monthly basis and foreign exchange position is measured on a daily basis. It is measured separately by currency for assets and liabilities denominated in foreign currencies exceeding 5% of total assets and liabilities denominated in foreign currencies.

3) Measurement method

① VaR

The Bank uses a yearly VaR to measure market risk. The yearly VaR is a statistically estimated maximum amount of loss that could occur in one year under normal distribution of financial variables. The Bank calculates VaR using equal weighted-average method based on historical changes in market rates, prices and volatilities over the previous five years data and measures VaR at a 99% single tail confidence level. VaR is a commonly used market risk management technique. However, the method has some limitations.

VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movement, however, is not necessarily a good indicator of future events, as there may be conditions and circumstances in the future that the model does not anticipate. As a result, the timing and magnitude of the actual losses can be different, depending on the assumptions made at the time of calculation. In addition, the time periods used for the model, generally one day or 10 days, are assumed to be a sufficient holding period before liquidating the relevant underlying positions. If these holding periods are not sufficient, or too long, the VaR results may understate or overstate the potential loss.

② Stress testing

The stress testing is carried out to analyze the abnormal market situation reflecting intrinsic volatility of foreign exchange that has significant influent on the value of portfolio. The Bank mainly uses historical scenario tool and also uses hypothetical scenario tool for the analysis of an abnormal market situation. Stress testing is performed at least once in every quarter.

③ Results of measurement

Results of foreign exchange VaR as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				December 31, 2016			
	Average	Minimum	Maximum	Ending	Average	Minimum	Maximum	Ending
Foreign exchange risk	₩55,558	₩6,117	₩111,035	₩37,718	₩64,770	₩39,693	₩102,371	₩39,693

(3) Interest rate risk

1) Management of interest rate risk

Interest rate risk management limit is set up and included in internal capital management limit. A risk management division head monitors changes of interest rate risk by source and compliance of risk limits regularly. A finance division head also monitors changes of interest rate risk by source and compliance of risk limits. The finance division head needs to cooperate with the risk management division head in case it is expected that the Bank will be exposed to a new risk. The risk management division head orders related divisions to prepare countermeasures in case it is apprehended that interest rate risk exceeds risk limit. If interest rate risk exceeds the risk limit, the risk management division head orders related divisions to prepare countermeasures and reports to Risk Management Committee after resolving the exceeded limit problem.

2) Measurement of interest rate risk

Interest rate risk is managed by measuring interest rate EaR and interest rate VaR and uses interest rate sensitivity gap and duration gap as supplementary index. Interest rate EaR and interest rate VaR are measured on a monthly basis, and interest rate sensitivity gap and duration gap are measured on a daily basis. The Bank simulates analysis reflecting market environment, product features and the Bank’s strategies.

3) Measurement method

① VaR

The Bank uses a yearly VaR to measure market risk. The yearly VaR is a statistically estimated maximum amount of loss that could occur in one year under normal distribution of financial variables. The Bank calculates VaR using equal-weighted-average method based on historical changes in market rates, prices and volatilities over the previous 5 years data and measures VaR at a 99% single tail confidence level. This means the actual amount of loss may exceed the VaR, on average, once out of 100 business days. VaR is a commonly used market risk management technique. However, the method has some shortcomings.

VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movement, however, is not necessarily a good indicator of future events, as there may be conditions and circumstances in the future that the model does not anticipate. As a result, the timing and magnitude of the actual losses can be different depending on the assumptions made at the time of calculation. In addition, the time periods used for the model, generally one day or 10 days, are assumed to be a sufficient holding period before liquidating the relevant underlying positions. If these holding periods are not sufficient, or too long, the VaR results may understate or overstate the potential loss.

② Stress testing

The stress testing is carried out to analyze the abnormal market situation reflecting intrinsic volatility of interest rate that has significant influence on the value of portfolio. The Bank mainly uses historical scenario tool and also uses hypothetical scenario tool for the analysis of an abnormal market situation. Stress testing is performed at least once in every quarter.

③ Results of measurement

Results of interest rate VaR as of December 31, 2017 and 2016 is as follows (Korean won in millions):

	December 31, 2017				December 31, 2016			
	Average	Minimum	Maximum	Ending	Average	Minimum	Maximum	Ending
Interest rate risk	₩112,024	₩58,413	₩179,886	₩96,423	₩105,424	₩92,314	₩155,703	₩97,983

4-5. Capital risk

The Bank follows the standard of capital adequacy established by the Financial Services Commission. The standard is based on Basel III, which was established by Basel Committee on Banking Supervision in BIS. According to the standard, domestic banks should maintain at least 8% or above of BIS capital ratio for risk-weighted asset, and quarterly report BIS capital ratio to the Financial Supervisory Service.

According to Korean Banking Supervision rules for operations, the Bank's capitals are mainly divided into two categories:

1) Tier 1 capital (basic capital): Basic capital is composed of capital stock-common and other basic capital. Capital stock-common includes common stock satisfied with qualifications, capital surplus, retained earnings, accumulated other comprehensive income, other reserves and non-controlling interests among the common stock of consolidated subsidiaries. Other basic capital includes securities and capital surplus satisfied with qualifications

2) Tier 2 capital (supplementary capital): Supplementary capital is composed of the securities and capital surplus satisfied with qualifications, non-controlling interests among the securities of consolidated subsidiaries and the amounts of less than below 1.25% of credit risk-weighted asset like allowance for credit losses in respect of credits classified as normal or precautionary.

The risk-weighted asset includes intrinsic risks in total assets, errors of internal operation processes and loss risk from external events. It indicates a size of assets reflecting the level of risks that the Bank bears. The Bank computes the risk-weighted asset by risks (credit risk, market risk and operational risk) and uses it for calculation of BIS capital ratio.

5. FINANCIAL ASSETS AND FINANCIAL LIABILITIES:

5-1. Classification and fair value

(1) Carrying amounts and fair values of financial instruments as of December 31, 2017 and 2016 are as follows (Korean won in millions):

		December 31, 2017		December 31, 2016	
	Classification	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets:					
Cash and due from financial institutions	Non-recurring	₩ 2,091,920	₩ 2,092,008	₩ 3,863,279	₩ 3,863,247
Financial assets at FVTPL	Recurring	1,616,973	1,616,973	1,899,065	1,899,065
Hedging derivative assets	Recurring	228,121	228,121	168,417	168,417
Loans	Non-recurring	68,223,320	69,459,210	73,418,788	75,098,073
AFS financial assets	Recurring	6,692,478	6,692,478	7,027,451	7,027,451
HTM financial assets	Non-recurring	89,477	89,119	111,334	111,131
Other financial assets	Non-recurring	933,510	933,510	983,090	983,090
		₩79,875,799	₩81,111,419	₩87,471,424	₩89,150,474
Financial liabilities:					
Financial liabilities at FVTPL	Recurring	₩ 911,778	₩ 911,778	₩ 852,699	₩ 852,699
Hedging derivative liabilities	Recurring	1,058,196	1,058,196	2,335,530	2,335,530
Borrowings	Non-recurring	6,013,457	5,985,700	9,761,389	9,762,894
Debentures	Non-recurring	60,685,098	61,193,068	62,119,016	62,917,874
Other financial liabilities	Non-recurring	1,794,498	1,794,498	1,641,018	1,641,018
		₩70,463,027	₩70,943,240	₩76,709,652	₩77,510,015

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. For each class of financial assets and financial liabilities, the Bank discloses the fair value of that class of assets and liabilities in a way that permits them to be compared with their carrying amount at the end of each reporting period. The best evidence of fair value of financial instruments is quoted price in an active market.

Methods for measuring fair value of financial instruments are as follows:

Financial instruments	Method of measuring fair value
Loans and receivables	As demand deposits and transferable deposits do not have maturity and are readily convertible to cash, the carrying amounts of these deposits approximate their fair values. Fair values of the deposits with the maturity of more than one year are determined by discounted cash flow model ("DCF model").
	DCF model is also used to determine the fair value of loans. Fair value is determined by discounting the cash flows expected from the each contractual period by applying the discount rates for each period.
Investment securities	Trading financial assets and liabilities and AFS financial assets are measured at fair value using a quoted market price in an active market. If a quoted market price is not available, they are measured by using a price quoted by a third party, such as a pricing service or broker or using the DCF model.
Derivatives	For exchange traded derivative, quoted price in active market is used to determine fair value and for OTC derivative, fair value is determined primarily using the DCF model. The Bank uses internally developed valuation models that are widely used by market participants to determine fair value of plain OTC derivatives including option, interest rate swap and currency swap based on observable market parameters. However, some complex financial instruments are valued using the results of independent pricing services, where part or all of the inputs are not observable in the market.
Borrowings	Fair value is determined using DCF model discounting contractual future cash flows by appropriate discount rate.
Debentures	Fair value of debentures denominated in local currency is determined by using the valuation of independent third-party pricing services in accordance with the market prices that are quoted in active markets.
	Fair value of debentures denominated in foreign currencies is determined by DCF model.

Fair values of financial assets and financial liabilities classified as fair value Level 3 of the fair value hierarchy are determined by using the valuation of independent third-party pricing services. Meanwhile, carrying amounts of other financial assets and financial liabilities are regarded as an approximation of fair values.

(2) Fair value hierarchy

Fair value hierarchy of financial assets and liabilities which are not measured at fair value as of December 31, 2017 and 2016 is as follows (Korean won in millions):

(December 31, 2017)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from financial institutions	₩647,521	₩ —	₩ 1,444,487	₩ 2,092,008
Loans	—	—	69,459,210	69,459,210
HTM financial assets	—	89,119	—	89,119
Other financial assets	—	—	933,510	933,510
	₩647,521	₩ 89,119	₩71,837,207	₩72,573,847
Financial liabilities:				
Borrowings	₩ —	₩ 5,985,700	₩ —	₩ 5,985,700
Debentures	—	61,193,068	—	61,193,068
Other financial liabilities	—	—	1,794,498	1,794,498
	₩ —	₩67,178,768	₩ 1,794,498	₩68,973,266

(December 31, 2016)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from financial institutions	₩991,779	₩ —	₩ 2,871,468	₩ 3,863,247
Loans	—	—	75,098,073	75,098,073
HTM financial assets	—	111,131	—	111,131
Other financial assets	—	—	983,090	983,090
	₩991,779	₩ 111,131	₩78,952,631	₩80,055,541
Financial liabilities:				
Borrowings	₩ —	₩ 9,762,894	₩ —	₩ 9,762,894
Debentures	—	62,917,874	—	62,917,874
Other financial liabilities	—	—	1,641,018	1,641,018
	₩ —	₩72,680,768	₩ 1,641,018	₩74,321,786

Fair value hierarchy of financial assets and liabilities measured at fair value as of December 31, 2017 and 2016 is as follows (Korean won in millions):

(December 31, 2017)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩ 725,613	₩ 891,360	₩ —	₩1,616,973
Hedging derivative assets	—	228,121	—	228,121
AFS financial assets	319,416	812,471	3,906,416	5,038,303
	₩1,045,029	₩1,931,952	₩3,906,416	₩6,883,397
Financial liabilities:				
Financial liabilities at FVTPL	₩ —	₩ 911,778	₩ —	₩ 911,778
Hedging derivative liabilities	—	1,058,196	—	1,058,196
	₩ —	₩1,969,974	₩ —	₩1,969,974

(December 31, 2016)

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩1,210,523	₩ 688,542	₩ —	₩1,899,065
Hedging derivative assets	—	168,417	—	168,417
AFS financial assets	755,825	937,683	3,931,733	5,625,241
	₩1,966,348	₩1,794,642	₩3,931,733	₩7,692,723
Financial liabilities:				
Financial liabilities at FVTPL	₩ —	₩ 852,699	₩ —	₩ 852,699
Hedging derivative liabilities	—	2,335,530	—	2,335,530
	₩ —	₩3,188,229	₩ —	₩3,188,229

The Bank classifies financial instruments as three level of fair value hierarchy as below;

Level 1: Financial instruments measured at quoted prices from active markets are classified as fair value Level 1. This level includes listed equity securities, derivatives, and government bonds traded in an active exchange market.

Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as Level 2. This level includes the majority of debt and general OTC derivatives such as swap, futures and options

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. This level includes unlisted equity securities, structured bonds and OTC derivatives.

The valuation techniques and input variables of level 2 financial instruments subsequently not measured at fair value are as follows (Korean won in millions):

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
HTM financial assets			
Debt securities	₩ 89,119	DCF Model	Discount rate
Financial liabilities			
Borrowings	5,985,700	DCF Model	Discount rate
Debentures	61,193,068	DCF Model	Discount rate

(December 31, 2016)

	Fair value	Valuation techniques	Input variables
Financial assets			
HTM financial assets			
Debt securities	₩ 111,131	DCF Model	Discount rate
Financial liabilities			
Borrowings	9,762,894	DCF Model	Discount rate
Debentures	62,917,874	DCF Model	Discount rate

The valuation techniques and input variables of level 3 financial instruments subsequently not measured at fair value as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
Loans	₩69,459,210	DCF Model	Discount rate
Other financial assets	933,510	DCF Model	Discount rate
Financial liabilities			
Other financial liabilities	1,794,498	DCF Model	Discount rate

(December 31, 2016)

	Fair value	Valuation techniques	Input variables
Financial assets			
Loans	₩75,098,073	DCF Model	Discount rate
Other financial assets	983,090	DCF Model	Discount rate
Financial liabilities			
Other financial liabilities	1,641,018	DCF Model	Discount rate

The valuation techniques and input variables of level 2 financial instruments, measured at fair value after initial recognition, as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Fair value	Valuation techniques	Input variables
Financial assets			
Financial assets at FVTPL			
Debt securities	₩ 38,665	DCF Model	Discount rate
Derivative assets for trading	852,695	DCF Model	Discount rate
Hedging derivative assets	228,121	DCF Model	Discount rate
AFS financial assets			
Debt securities	812,471	DCF Model	Discount rate
Financial liabilities			
Financial liabilities at FVTPL			
Derivative liabilities for trading	911,778	DCF Model	Discount rate
Hedging derivative liabilities	1,058,196	DCF Model	Discount rate

(December 31, 2016)

	Fair value	Valuation techniques	Input variables
Financial assets			
Financial assets at FVTPL			
Debt securities	₩ 41,193	DCF Model	Discount rate
Derivative assets for trading	647,349	DCF Model	Discount rate
Hedging derivative assets	168,417	DCF Model	Discount rate
AFS financial assets			
Debt securities	937,683	DCF Model	Discount rate
Financial liabilities			
Financial liabilities at FVTPL			
Derivative liabilities for trading	852,699	DCF Model	Discount rate
Hedging derivative liabilities	2,335,530	DCF Model	Discount rate

Below table accounts for quantitative information of fair value using input factor, which is significant but unobservable, and relation between unobservable input factor and estimate of fair value.

(December 31, 2017)

	Fair value (Korean won in millions)	Valuation techniques	Significant unobservable input factors	Range	Relationship between unobservable input factors and fair value estimates
AFS financial assets:					
Unlisted stock	₩3,906,416	DCF Model CCA Methods NAV Methods FTE Methods	Discount rate	5.49%~19.31%	If discount rate is decreased (increased)/if growth rate is increased (decrease), fair value is increased (decreased).
			Growth rate	—	

(December 31, 2016)

	Fair value (Korean won in millions)	Valuation techniques	Significant unobservable input factors	Range	Relationship between unobservable input factors and fair value estimates
AFS financial assets:					
Unlisted stock	₩3,931,733	DCF Model CCA Methods NAV Methods	Discount rate	4.50%~20.04%	If discount rate is decreased (increased)/if growth rate is increased (decrease), fair value is increased (decreased).
			Growth rate	—	

1) Changes in Level 3 financial assets that are measured at fair value for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

	Beginning balance	Profit (Loss)	Other comprehensive income	Purchases/ issues	Sales/ settlements	Transfers into Level 3 / Transfers out of Level 3	Ending balance
Financial assets							
AFS financial assets	₩3,931,733	₩(80)	₩(87,259)	₩64,366	₩(2,344)	₩—	₩3,906,416

(2016)

	Beginning balance	Profit (Loss)	Other comprehensive income	Purchases/ issues	Sales/ settlements	Transfers into Level 3 / Transfers out of Level 3	Ending balance
Financial assets							
AFS financial assets	₩3,704,041	₩(114)	₩192,185	₩34,434	₩(2,703)	₩3,890	₩3,931,733

2) In relation to changes in Level 3 of the fair value hierarchy, total gains or losses recognized in profit or loss for the period, and total gains or losses for financial instruments held at the end of the reporting period in the separate statement of comprehensive income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Total gains (losses) for financial instruments held at the end of the reporting period	₩(80)	₩(114)
Total losses included in profit or loss for the period	(80)	(114)

3) The sensitivity of fair value analysis for the Level 3 financial instruments

The Bank performed the sensitivity analysis for the Level 3 financial instruments for which fair value would be measured differently upon reasonably possible alternative assumptions. The Bank classified the effect from changes upon the alternative assumptions into favorable effect and unfavorable effect and presented the most favorable effect or the most unfavorable effect in the table hereunder. Stocks are the financial instruments subject to sensitivity analysis, which are classified as Level 3 and of for which changes in fair value are recognized as other comprehensive income. Meanwhile, equity instruments which are recognized as cost among the financial instruments and are classified as Level 3 are excluded from the sensitivity analysis.

Sensitivity analysis details per market risk variable of each Level 3 financial instrument held and measured at fair value are as follows (Korean won in millions):

(December 31, 2017)

	Net income (loss)		Other comprehensive income (loss)	
	Favorable	Unfavorable	Favorable	Unfavorable
Financial assets:				
AFS Financial assets(*)	₩—	₩—	₩3,175,806	₩(936,590)

(*) Changes in fair value of stocks are computed along with the increases or decreases in either growth rate from nil to 1 % and discount rate or liquidation value from negative 1 % to 1 % and discount rate, which are unobservable inputs.

(December 31, 2016)

	Net income (loss)		Other comprehensive income (loss)	
	Favorable	Unfavorable	Favorable	Unfavorable
Financial assets:				
AFS Financial assets(*)	₩—	₩—	₩4,477,511	₩(1,106,192)

(*) Changes in fair value of stocks are computed along with the increases or decreases in either growth rate from nil to 1 % and discount rate or liquidation value from negative 1 % to 1 % and discount rate, which are unobservable inputs.

(3) The table below provides the Bank's financial assets and financial liabilities that are carried at cost since the fair values of the financial instruments are not readily determinable in the separate statements of financial position. (Korean won in millions)

	Dec. 31, 2017	Dec. 31, 2016
AFS financial assets		
Unlisted securities(*)	₩1,648,692	₩1,396,762
Equity investments to unincorporated entities(*)	5,483	5,448
	₩1,654,175	₩1,402,210

(*) AFS financial assets are unlisted equity securities and equity investments and recorded as at cost since they do not have quoted prices in an active market and the fair values are not measured with reliability.

5-2. Carrying amounts of financial instruments

Carrying amounts of financial instruments as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Financial assets at FVTPL	Loans	AFS financial assets	HTM financial assets	Hedging derivative assets	Total
Financial assets:						
Cash and due from financial institutions	₩ —	₩ 2,091,920	₩ —	₩ —	₩ —	₩ 2,091,920
Financial assets at FVTPL	1,616,973	—	—	—	—	1,616,973
Hedging derivative assets	—	—	—	—	228,121	228,121
Loans	—	68,223,320	—	—	—	68,223,320
Financial investments	—	—	6,692,478	89,477	—	6,781,955
Other financial assets	—	933,510	—	—	—	933,510
Total	₩1,616,973	₩71,248,750	₩6,692,478	₩89,477	₩228,121	₩79,875,799

	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Hedging derivative liabilities	Total
Financial liabilities:				
Financial liabilities at FVTPL	₩911,778	₩ —	₩ —	₩ 911,778
Hedging derivative liabilities	—	—	1,058,196	1,058,196
Borrowings	—	6,013,457	—	6,013,457
Debentures	—	60,685,098	—	60,685,098
Other financial liabilities	—	1,794,498	—	1,794,498
Total	₩911,778	₩68,493,053	₩1,058,196	₩70,463,027

(December 31, 2016)

	Financial assets at FVTPL	Loans	AFS financial assets	HTM financial assets	Hedging derivative assets	Total
Financial assets:						
Cash and due from financial institutions	₩ —	₩ 3,863,279	₩ —	₩ —	₩ —	₩ 3,863,279
Financial assets at FVTPL	1,899,065	—	—	—	—	1,899,065
Hedging derivative assets	—	—	—	—	168,417	168,417
Loans	—	73,418,788	—	—	—	73,418,788
Financial investments	—	—	7,027,451	111,334	—	7,138,785
Other financial assets	—	983,090	—	—	—	983,090
Total	₩1,899,065	₩78,265,157	₩7,027,451	₩111,334	₩168,417	₩87,471,424

	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Hedging derivative liabilities	Total
Financial liabilities:				
Financial liabilities at FVTPL	₩852,699	₩ —	₩ —	₩ 852,699
Hedging derivative liabilities	—	—	2,335,530	2,335,530
Borrowings	—	9,761,389	—	9,761,389
Debentures	—	62,119,016	—	62,119,016
Other financial liabilities	—	1,641,018	—	1,641,018
Total	₩852,699	₩73,521,423	₩2,335,530	₩76,709,652

5-3. Offset on financial instruments

The Bank has conditional rights of setoff that are enforceable and exercisable only in the events mentioned in agreements regardless of meeting some or all of the offsetting criteria in K-IFRS No.1032 for financial instruments. Cash collaterals do not meet the offsetting criteria in K-IFRS No.1032, but they can be set off with net amount of financial instruments.

The effects of netting agreements as of December 31, 2017 and 2016 are as follow (Korean won in millions):

(December 31, 2017)

	Gross amounts of recognized financial assets (liabilities)	Gross amounts of recognized financial liabilities (assets) to be setoff	Net amounts of financial assets (liabilities) presented in the separate statement of financial position	Amount that is not offset in the financial statements		Net amount
				Financial instruments	Cash collateral	
Financial assets:						
Derivatives	₩1,080,816	₩—	₩1,080,816	₩(535,438)	₩ (38,009)	₩507,369
Financial liabilities:						
Derivatives	1,969,974	—	1,969,974	(535,438)	(667,220)	767,316

(December 31, 2016)

	Gross amounts of recognized financial assets (liabilities)	Gross amounts of recognized financial liabilities (assets) to be setoff	Net amounts of financial assets (liabilities) presented in the separate statement of financial position	Amount that is not offset in the financial statements		Net amount
				Financial instruments	Cash collateral	
Financial assets:						
Derivatives	₩ 815,766	₩—	₩ 815,766	₩(371,033)	₩ —	₩ 444,733
Financial liabilities:						
Derivatives	3,188,229	—	3,188,229	(371,033)	(1,638,738)	1,178,458

5-4. Transfer of financial assets

The Bank has securities sold under repurchase agreements (“RP”), and it refers to the financial assets that have been transferred, but presented in the separate financial statements since the assets do not meet the conditions of de-recognition. In case of securities sold under the RP, securities are disposed, but the Bank agrees to repurchase at the fixed amount, so that the Bank retains substantially all the risks and rewards of ownership of the securities. There are no carrying amounts of transferred assets and relevant liabilities as of December 31, 2017 and December 31, 2016.

6. OPERATING SEGMENT:

Though the Bank conducts business activities related to financial services, in accordance with relevant laws such as the Export-Import Bank of Korea Act, it does not report separate segment information, as management considers the Bank to be operating under one core business.

7. CASH AND DUE FROM FINANCIAL INSTITUTIONS:

(1) Cash and cash equivalents as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	Dec. 31, 2017	Dec. 31, 2016
Due from financial institutions in local currency	₩ 439,119	₩ 441,618
Due from financial institutions in foreign currencies	1,652,801	3,421,661
Subtotal	2,091,920	3,863,279
Restricted due from financial institutions	(985,926)	(2,178,585)
Due from financial institutions with original maturities of more than three months at acquisition date	(290,000)	(330,000)
Subtotal	(1,275,926)	(2,508,585)
Total(*)	₩ 815,994	₩ 1,354,694

(*) It is equal to the due from financial institutions as presented on the separate statements of cash flows.

(2) Details of due from financial institutions as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	December 31, 2017 Amount	December 31, 2017 Interest (%)	December 31, 2016 Amount	December 31, 2016 Interest (%)
Due from financial institutions in local currency:				
Demand deposits	₩ 1,439	—	₩ 1,857	—
Time deposits	430,000	1,60 ~ 2.15	330,000	1,60 ~ 1.94
Others	4,900	1.10	3,800	1.35
Margin for derivatives	2,780	—	105,961	—
Subtotal	439,119		441,618	
Due from financial institutions in foreign currencies:				
Demand deposits	44,057	—	39,892	—
Time deposits	28,473	—	682,502	0.00 ~ 0.66
On demand	572,133	—	362,884	—
Offshore demand deposits	24,993	—	46,230	—
Others	784,438	0.00 ~ 0.45	2,287,237	0.00 ~ 0.45
Margin for derivatives	198,707	—	2,916	—
Subtotal	1,652,801		3,421,661	
Total	₩2,091,920		₩3,863,279	

(3) Restricted due from financial institutions as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	Financial Institution	Dec. 31, 2017	Dec. 31, 2016	Reason for restriction
Others	DEUTSCHE BANK TRUST COMPANY AMERICAS and others	₩985,926	₩2,178,585	Credit support annex for derivative transactions

8. FINANCIAL ASSETS AT FVTPL:

Details of financial assets at FVTPL as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Equity securities		
Beneficiary certificates	₩ 725,613	₩1,210,523
Debt securities		
Debt securities in foreign currency	38,665	41,193
Derivative assets		
Stocks	1,444	2,151
Interest product	329,246	231,219
Currency product	521,982	413,979
Others	23	—
Subtotal	852,695	647,349
Total	₩1,616,973	₩1,899,065

9. FINANCIAL INVESTMENTS:

Details of financial investments as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
AFS securities in local currency		
Equity securities		
Marketable securities	₩ 220,370	₩ 755,825
Non-marketable securities	5,410,644	5,248,767
Equity investments in unincorporated entities	62,117	41,822
Others	65,642	23,097
Debt securities		
Debt securities	149,085	353,467
Subtotal	5,907,858	6,422,978
AFS securities in foreign currencies		
Equity securities		
Stocks	17,764	15,835
Paid-in capital	4,423	4,423
Debt securities		
Debt securities(*)	762,433	584,215
Subtotal	784,620	604,473
HTM securities in foreign currencies		
Debt securities		
Debt securities	89,477	111,334
Total	₩6,781,955	₩7,138,785

(*) It includes securities, which are pledged as collateral amounting to ₩31,220 million and ₩11,651 million as of December 31, 2017, and 2016, respectively.

10. LOANS:

Loans as presented below exclude loan valuation adjustment related to fair value hedging amounting to ₩24,182 million and ₩47,397 million, as of December 31, 2017 and 2016, respectively.

(1) Details of loans as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Detail	Dec. 31, 2017	Dec. 31, 2016
Loans in local currency	Loans for export	₩12,027,416	₩10,590,820
	Loans for foreign investments	797,992	798,796
	Loans for import	1,959,237	1,391,905
	Troubled Debt Restructuring(*1)	2,161,537	1,973,981
	Others	2,009,825	1,422,853
	Subtotal	18,956,007	16,178,355
Loans in foreign currencies	Loans for export	25,985,848	29,592,407
	Loans for foreign investments	19,518,443	22,709,442
	Loans for rediscounted trading notes	—	84,595
	Loans for import	1,594,141	2,138,489
	Overseas funding loans	546,938	590,133
	Domestic usance bills(*2)	172,830	211,097
	Others	54,422	196,838
	Subtotal	47,872,622	55,523,001
Others	Foreign-currency bills bought	1,063,717	1,348,135
	Advance payments on acceptances and guarantees	10,656	353,618
	Call loans	2,056,086	2,765,307
	Interbank loans in foreign currencies	1,925,158	555,645
	Subtotal	5,055,617	5,022,705
	Total	71,884,246	76,724,061
	Net deferred origination fees and costs	(398,113)	(426,935)
	Allowance for loan losses	(3,286,995)	(2,925,735)
	Total	₩68,199,138	₩73,371,391

(*1) Representing loans originated by the Bank to companies that are undergoing debt restructuring activities.
(*2) Representing receivables associated with letters of credit issued by domestic banks in Korea.

(2) Loans classified by type of customers as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

	Detail	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)
Customer	Large enterprise	₩ 8,000,990	₩29,003,791	₩ 160,194	₩37,164,975	60.29
	Small and medium sized enterprise	8,511,777	6,207,018	132,851	14,851,646	24.09
	Public sector and others	1,083,874	8,545,395	—	9,629,269	15.62
	Subtotal	17,596,641	43,756,204	293,045	61,645,890	100.00
	Net deferred origination fees and costs	(3,886)	(392,432)	—	(396,318)	
	Allowance for loan losses	(2,891,976)	(368,530)	(9,700)	(3,270,206)	
	Subtotal	14,700,779	42,995,242	283,345	57,979,366	
Financial institution	Bank	1,359,366	2,368,339	4,494,987	8,222,692	80.31
	Others	—	1,748,079	267,585	2,015,664	19.69
	Subtotal	1,359,366	4,116,418	4,762,572	10,238,356	100.00
	Net deferred origination fees and costs	—	(1,795)	—	(1,795)	
	Allowance for loan losses	(800)	(8,450)	(7,539)	(16,789)	
	Subtotal	1,358,566	4,106,173	4,755,033	10,219,772	
	Total	₩16,059,345	₩47,101,415	₩5,038,378	₩68,199,138	

(December 31, 2016)

	Detail	Loans in local currency	Loans in foreign currencies	Others	Total	Ratio (%)
Customer	Large enterprise	₩ 7,423,734	₩34,017,701	₩ 569,826	₩42,011,261	62.29
	Small and medium sized enterprise	7,671,167	7,181,736	205,582	15,058,485	22.33
	Public sector and others	419,103	9,938,046	8,494	10,365,643	15.38
	Subtotal	15,514,004	51,137,483	783,902	67,435,389	100.00
	Net deferred origination fees and costs	(3,193)	(420,868)	—	(424,061)	
	Allowance for loan losses	(1,847,258)	(913,829)	(142,853)	(2,903,940)	
	Subtotal	13,663,553	49,802,786	641,049	64,107,388	
Financial institution	Bank	664,351	2,787,481	3,929,626	7,381,458	79.47
	Others	—	1,598,037	309,177	1,907,214	20.53
	Subtotal	664,351	4,385,518	4,238,803	9,288,672	100.00
	Net deferred origination fees and costs	—	(2,874)	—	(2,874)	
	Allowance for loan losses	(941)	(17,198)	(3,656)	(21,795)	
	Subtotal	663,410	4,365,446	4,235,147	9,264,003	
	Total	₩14,326,963	₩54,168,232	₩4,876,196	₩73,371,391	

(3) Changes in allowance for loan losses for the year ended December 31, 2017 and 2016, are as follows (Korean won in millions):

(2017)

	Individual assessment	Collective assessment	Total
Beginning balance	₩2,228,715	₩ 697,020	₩2,925,735
Written-off	(205,540)	(79,080)	(284,620)
Collection of written-off loans	445	18,094	18,539
Loan-for-equity swap	(48,404)	(4,093)	(52,497)
Others	—	(938,437)	(938,437)
Unwinding effect	(74,103)	(5,745)	(79,848)
Foreign exchange translation	(10,137)	(15,932)	(26,069)
Additional provisions, net of reversals	706,250	1,017,942	1,724,192
Transfer in (out)	372,475	(372,475)	—
Ending balance	₩2,969,701	₩ 317,294	₩3,286,995

(2016)

	Individual assessment	Collective assessment	Total
Beginning balance	₩1,994,753	₩ 410,543	₩2,405,296
Written-off	(458,272)	(94,618)	(552,890)
Collection of written-off loans	48,043	16,971	65,014
Loan-for-equity swap	(749,980)	(2,646)	(752,626)
Others	—	(124,729)	(124,729)
Unwinding effect	(39,148)	(9,743)	(48,891)
Foreign exchange translation	1,877	4,087	5,964
Additional provisions, net of reversals	1,077,240	851,357	1,928,597
Transfer in (out)	354,202	(354,202)	—
Ending balance	₩2,228,715	₩ 697,020	₩2,925,735

11. INVESTMENTS IN ASSOCIATES AND SUBSIDIARIES:

(1) Details of investments in associates and subsidiaries as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Company(*1)	Detail	Location	Business	Year-end	Ownership (%)	Net asset	Carrying amount
KEXIM Bank UK Limited	Subsidiary	United Kingdom	Financial service	December	100.00	₩ 45,079	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	Vietnam	Financial service	December	100.00	15,568	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	Indonesia	Financial service	December	85.00	27,359	25,270
KEXIM Asia Limited	Subsidiary	Hong Kong	Financial service	December	100.00	60,176	49,139
Korea Asset Management Corporation	Associate	Korea	Financial service	December	25.86	450,571	380,520
Credit Guarantee and Investment Fund(*2,5)	Associate	Philippines	Financial service	December	14.29	113,046	115,486
Korea Marine Guarantee Inc.	Associate	Korea	Financial service	December	41.88	130,788	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.(*3,5)	Associate	Korea	Shipbuilding	December	81.25	(972,550)	—
DAESUN Shipbuilding & Engineering Co., Ltd.(*3,5)	Associate	Korea	Shipbuilding	December	67.30	(264,588)	—
KTB Newlake Global Healthcare PEF	Associate	Korea	Financial service	December	25.00	2,010	2,570
KBS-KDB Private Equity Fund	Associate	Korea	Financial service	December	20.83	2,096	2,367
Korea Shipping and Maritime Transportation	Associate	Korea	Financial service	December	40.00	304,812	362,000
Korea Aerospace Industries. Ltd.	Associate	Korea	Manufacturing	December	26.41	301,181	1,467,520
Total							₩2,598,607

(December 31, 2016)

Company(*1)	Detail	Location	Business	Year-end	Ownership (%)	Net asset	Carrying amount
KEXIM Bank UK Limited	Subsidiary	United Kingdom	Financial service	December	100.00	₩ 44,107	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	Vietnam	Financial service	December	100.00	15,851	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	Indonesia	Financial service	December	85.00	24,730	25,270
KEXIM Asia Limited	Subsidiary	Hong Kong	Financial service	December	100.00	65,709	49,139
Korea Asset Management Corporation	Associate	Korea	Financial service	December	25.86	446,956	380,520
Credit Guarantee and Investment Fund(*2)	Associate	Philippines	Financial service	December	14.29	127,209	115,486
Korea Marine Guarantee Inc.(*4)	Associate	Korea	Financial service	December	52.63	130,811	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.(*3)	Associate	Korea	Shipbuilding	December	70.71	(918,623)	—
DAESUN Shipbuilding & Engineering Co., Ltd.(*3)	Associate	Korea	Shipbuilding	December	67.27	(262,593)	—
EQP Global Energy Infrastructure PEF	Associate	Korea	Financial service	December	22.64	(417)	280
KTB Newlake Global Healthcare PEF	Associate	Korea	Financial service	December	25.00	760	1,153
KBS-KDB Private Equity Fund	Associate	Korea	Financial service	December	20.83	421	501
Total							₩766,084

(*1) In cases of associates, the amounts represent net asset after taking into account percentage of ownership.

(*2) As of December 31, 2017 and 2016, Credit Guarantee and Investment Fund is classified into an associate because the Bank has significant influence in the way of representation on the board of directors or equivalent governing body of the investee.

(*3) Those companies are under the creditor-led work out programs. The Bank should hold at least 75% of the voting rights to have substantive control based on the creditor's agreement. As the Bank holds only 69.01% and 70.06% of the voting rights, respectively, those are classified into associates.

(*4) Based on the stockholders' agreement, the Bank does not have substantial control over the entity, thereby classifying the entity as an associate.

(*5) Financial statements as of September 30, 2017 are using (due to the unavailability of the ones as of December 31, 2017) in which the significant transactions or events, which occurred between the end of preceding reporting period of an associate and that of the Bank, had been reflected.

(2) Changes in investments in associates and subsidiaries for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

Company	Detail	Beginning balance	Acquisition	Disposals	Impairment loss	Ending balance
KEXIM Bank UK Limited	Subsidiary	₩ 48,460	₩ —	₩ —	₩ —	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	10,275	—	—	—	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	25,270	—	—	—	25,270
KEXIM Asia Limited	Subsidiary	49,139	—	—	—	49,139
Korea Asset Management Corporation	Associate	380,520	—	—	—	380,520
Credit Guarantee and Investment Fund	Associate	115,486	—	—	—	115,486
Korea Marine Guarantee Inc.	Associate	135,000	—	—	—	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	—	236	—	(236)	—
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	—	—	—	—	—
EQP Global Energy Infrastructure PEF	Associate	280	—	(280)	—	—
KTB Newlake Global Healthcare PEF	Associate	1,153	1,417	—	—	2,570
KBS-KDB Private Equity Fund	Associate	501	1,866	—	—	2,367
Korea Shipping and Maritime Transportation	Associate	—	362,000	—	—	362,000
Korea Aerospace Industries. Ltd.	Associate	—	1,467,520	—	—	1,467,520
Total		₩766,084	₩1,833,039	₩(280)	₩(236)	₩2,598,607

(2016)

Company	Detail	Beginning balance	Acquisition	Impairment loss	Ending balance
KEXIM Bank UK Limited	Subsidiary	₩ 48,460	₩ —	₩ —	₩ 48,460
KEXIM Vietnam Leasing Co.	Subsidiary	10,275	—	—	10,275
PT.KOEXIM Mandiri Finance	Subsidiary	25,270	—	—	25,270
KEXIM Asia Limited	Subsidiary	49,139	—	—	49,139
Korea Asset Management Corporation	Associate	380,520	—	—	380,520
Credit Guarantee and Investment Fund	Associate	115,486	—	—	115,486
Korea Marine Guarantee Inc.	Associate	50,000	85,000	—	135,000
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	—	3,382	(3,382)	—
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	—	1,033	(1,033)	—
EQP Global Energy Infrastructure PEF	Associate	175	105	—	280
KTB Newlake Global Healthcare PEF	Associate	—	1,153	—	1,153
KBS-KDB Private Equity Fund	Associate	—	501	—	501
Total		₩679,325	₩91,174	₩(4,415)	₩766,084

(3) Summarized financial information of associates and subsidiaries as of and for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Company	Assets	Liabilities	Operating income (loss)	Net income (loss)	Comprehensive net income (loss)
KEXIM Bank UK Limited	₩ 453,479	₩ 408,400	₩ 3,470	₩ 2,831	₩ (1,129)
KEXIM Vietnam Leasing Co.	144,783	129,216	1,786	1,599	(2,166)
PT.KOEXIM Mandiri Finance	176,436	149,077	2,769	2,397	(5,003)
KEXIM Asia Limited	423,166	362,989	3,452	3,094	(13,969)
Korea Asset Management Corporation	3,567,608	1,825,259	60,350	45,137	33,104
Credit Guarantee and Investment Fund	837,193	46,106	12,234	12,310	15,269
Korea Marine Guarantee Inc.	331,270	18,978	(849)	(1,863)	(1,785)
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,294,318	2,703,607	43,967	7,976	15,412
DAESUN Shipbuilding & Engineering Co., Ltd.	420,575	795,346	(10,398)	(143)	(143)
KTB Newlake Global Healthcare PEF	8,279	239	(671)	(671)	(671)
KBS-KDB Private Equity Fund	10,516	454	(915)	(915)	(915)
Korea Shipping and Maritime Transportation	764,796	2,767	27,646	(153,589)	(142,856)
Korea Aerospace Industries. Ltd.	3,166,223	2,025,818	(208,873)	(235,186)	(239,776)

(December 31, 2016)

Company	Assets	Liabilities	Operating income (loss)	Net income (loss)	Comprehensive net income (loss)
KEXIM Bank UK Limited	₩ 525,225	₩ 481,117	₩ 2,881	₩ 1,759	₩ (11,236)
KEXIM Vietnam Leasing Co.	167,145	151,294	1,835	1,515	2,504
PT.KOEXIM Mandiri Finance	172,187	143,093	3,492	3,419	6,177
KEXIM Asia Limited	422,804	357,094	3,284	2,736	7,240
Korea Asset Management Corporation	2,546,010	817,641	57,506	97,236	98,095
Credit Guarantee and Investment Fund	940,953	50,755	10,892	10,805	13,531
Korea Marine Guarantee Inc.	259,610	11,061	(4,569)	(4,181)	(4,327)
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,896,604	3,195,746	25,475	154,866	151,407
DAESUN Shipbuilding & Engineering Co., Ltd.	387,613	777,970	(25,466)	39,452	39,428
EQP Global Energy Infrastructure PEF	1	1,845	(1,846)	(1,846)	(1,846)
KTB Newlake Global Healthcare PEF	3,327	286	(1,002)	(1,002)	(1,002)
KBS-KDB Private Equity Fund	2,325	303	(384)	(384)	(384)

12. TANGIBLE ASSETS:

(1) Details of tangible assets for the year ended December 31,2017, and 2016, are as follows (Korean won in millions):

(December 31, 2017)

Detail	Acquisition cost	Accumulated depreciation	Government grants	Book value
Lands	₩190,807	₩ —	₩—	₩190,807
Buildings	97,539	(33,834)	(17)	63,688
Vehicles	3,961	(3,088)	—	873
Furniture and fixture	35,014	(21,917)	—	13,097
Total	₩327,321	₩(58,839)	₩(17)	₩268,465

(December 31, 2016)

Detail	Acquisition cost	Accumulated depreciation	Government grants	Book value
Lands	₩190,807	₩ —	₩—	₩190,807
Buildings	97,539	(31,139)	(17)	66,383
Vehicles	4,087	(2,809)	—	1,278
Furniture and fixture	36,199	(21,530)	—	14,669
Total	₩328,632	₩(55,478)	₩(17)	₩273,137

(2) Changes in tangible assets for the year ended December 31, 2017, and 2016, are as follows (Korean won in millions):

(2017)

Detail	Beginning balance	Acquisitions	Disposals	Depreciation	Ending balance
Lands	₩190,807	₩ —	₩—	₩ —	₩190,807
Buildings	66,383	—	—	(2,696)	63,687
Vehicles	1,278	230	(41)	(593)	874
Furniture and fixture	14,669	4,084	(5)	(5,651)	13,097
Total	₩273,137	₩4,314	₩(46)	₩(8,940)	₩268,465

(2016)

Detail	Beginning balance	Acquisitions	Disposals	Depreciation	Ending balance
Lands	₩191,193	₩ —	₩(386)	₩ —	₩190,807
Buildings	69,268	—	(186)	(2,699)	66,383
Vehicles	1,355	538	(12)	(603)	1,278
Furniture and fixture	9,682	9,343	(3)	(4,353)	14,669
Total	₩271,498	₩9,881	₩(587)	₩(7,655)	₩273,137

13. INTANGIBLE ASSETS:

(1) Details of intangible assets for the year ended December 31,2017, and 2016, are as follows (Korean won in millions):

(December 31, 2017)

Detail	Acquisition cost	Accumulated Depreciation	Accumulated Impairment Losses	Book value
Computer software	₩22,206	₩ (9,169)	₩ —	₩13,037
System development fees	46,405	(15,566)	—	30,839
Memberships	4,501	—	(755)	3,746
Total	₩73,112	₩(24,735)	₩(755)	₩47,622

(December 31, 2016)

Detail	Acquisition cost	Accumulated Depreciation	Accumulated Impairment Losses	Book value
Computer software	₩20,836	₩ (8,436)	₩ —	₩12,400
System development fees	45,906	(19,840)	—	26,066
Memberships	4,671	—	(538)	4,133
Total	₩71,413	₩(28,276)	₩(538)	₩42,599

(2) Changes in intangible assets for the year ended December 31, 2017, and 2016, are as follows (Korean won in millions):

(2017)

Detail	Beginning balance	Acquisitions	Disposals	Amortization	Impairment	Ending balance
Computer software	₩12,400	₩ 3,939	₩ —	₩(3,302)	₩ —	₩13,037
System development fees	26,066	10,690	—	(5,917)	—	30,839
Memberships	4,133	336	(506)	—	(217)	3,746
Total	₩42,599	₩14,965	₩(506)	₩(9,219)	₩(217)	₩47,622

(2016)

Detail	Beginning balance	Acquisitions	Disposals	Amortization	Impairment	Ending balance
Computer software	₩ 5,419	₩ 8,766	₩—	₩(1,785)	₩ —	₩12,400
System development fees	18,449	10,885	—	(3,268)	—	26,066
Memberships	4,671	—	—	—	(538)	4,133
Total	₩28,539	₩19,651	₩—	₩(5,053)	₩(538)	₩42,599

14. OTHER ASSETS:

(1) Details of other assets as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Other financial assets :		
Guarantee deposits	₩ 38,153	₩ 37,933
Accounts receivable	238,046	196,474
Accrued income	825,800	799,443
Receivable spot exchange	63	178
Allowances for loan losses on other assets	(168,552)	(50,938)
Subtotal	933,510	983,090
Other assets :		
Advance payments	1	14,843
Prepaid expenses	2,048	17,080
Current income tax asset	4,703	2,942
Sundry assets	10,269	27,813
Subtotal	17,021	62,678
Total	₩ 950,531	₩1,045,768

(2) Changes in allowances for loan losses on other assets for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Beginning balance	₩ 50,938	₩43,120
Write-off	—	(7,521)
Collection of written-off loans	15	58
Foreign exchange translation	(8)	2
Additional provisions	117,622	7,815
Others	(15)	7,464
Ending balance	₩168,552	₩50,938

15. BORROWINGS:

(1) Details of borrowings as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail	Lender	Interest rate (%)	Amount
Borrowings in foreign currencies:			
Borrowings from the Government	MINISTRY OF STRATEGY AND FINANCE	LIBOR 3M+0.50 ~ LIBOR 3M+0.78	₩2,976,435
Long term borrowings from foreign financial institutions	BANK OF AMERICA N.A and others	LIBOR 3M+0.40 ~ LIBOR 3M+0.85	2,678,500
Discount on borrowings			(2,224)
Commercial papers	BRED BANQUE POPULAIRE	(-)0.40	42,727
Offshore commercial papers denominated in foreign currency	BARCLAYS BANK PLC LONDON and others	(-)0.39 ~ 1.69	72,999
Others (Foreign banks)	DBS BANK LTD, SINGAPORE BRANCH and others	0.00 ~ 0.06	172,830
Others (CSA)	CITIBANK N.A., HONG KONG and others	—	72,190
Total			₩6,013,457

(December 31, 2016)

Detail	Lender	Interest rate (%)	Amount
Borrowings in foreign currencies:			
Borrowings from the Government	MINISTRY OF STRATEGY AND FINANCE	LIBOR 3M+0.50 ~ LIBOR 3M+0.78	₩3,199,262
Long term borrowings from foreign financial institutions	BANK OF AMERICA N.A and others	LIBOR 3M+0.40 ~ LIBOR 3M+1.10	3,746,350
Discount on borrowings			(5,507)
Commercial papers	CITIBANK N.A., HONG KONG and others	0.27 ~ 2.00	2,433,674
Offshore commercial papers denominated in foreign currency	BARCLAYS BANK PLC LONDON	0.52 ~ 1.48	164,646
Others (Foreign banks)	DBS BANK LTD, SINGAPORE BRANCH and others	0.16 ~ 3.69	211,097
Others (CSA)	JP MORGAN CHASE and others	—	11,867
Total			₩9,761,389

(2) Details of borrowings from other financial institutions as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail	Call money	Borrowings in foreign currency	Total
General bank	₩—	₩3,037,022	₩3,037,022

(December 31, 2016)

Detail	Call money	Borrowings in foreign currency	Total
General bank	₩—	₩6,562,127	₩6,562,127

Borrowings presented above exclude present value discounts.

16. DEBENTURES:

Details of debentures as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	December 31, 2017		December 31, 2016	
	Interest rate (%)	Amount	Interest rate (%)	Amount
Local currency:				
Floating rate	1.67 ~ 1.83	₩ 1,100,000	1.49 ~1.65	₩ 2,070,000
Fixed rate	1.35 ~ 4.70	13,020,000	1.26 ~ 4.50	10,010,000
Subtotal		14,120,000		12,080,000
Fair value hedging income		(80,211)		(48,530)
Discount on debentures:		(78,861)		(47,354)
Subtotal		13,960,928		11,984,116
Foreign currencies				
Floating rate	LIBOR+0.30 ~ LIBOR +1.00	7,685,330	LIBOR +0.30 ~ LIBOR +1.00	9,427,017
Fixed rate	0.17 ~ 9.32	39,253,997	0.12 ~ 9.32	40,876,373
Subtotal		46,939,327		50,303,390
Fair value hedging income		(98,744)		(27,290)
Discount on debentures		(116,413)		(141,200)
Subtotal		46,724,170		50,134,900
Total		₩60,685,098		₩62,119,016

17. PROVISIONS:

(1) Details of provisions as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Provisions for acceptances and guarantees	₩509,038	₩1,407,910
Provisions for unused loan commitments	166,080	228,839
Provisions for others	—	15,198
Total	₩675,118	₩1,651,947

(2) Changes in provisions for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

Detail	Acceptances and guarantees: Individual assessment	Acceptances and guarantees: Collective assessment	Acceptances and guarantees: Subtotal	Unused loan commitments	Provision for others	Total
Beginning balance	₩ 403,504	₩1,004,406	₩1,407,910	₩228,839	₩ 15,198	₩1,651,947
Foreign exchange translation	(5,572)	(14,047)	(19,619)	(104)	—	(19,723)
Additional provisions (Reversal of provision)	(314,764)	(564,489)	(879,253)	(62,655)	1,344	(940,564)
Transfers in (out)	370,270	(370,270)	—	—	(14,818)	(14,818)
Payment	—	—	—	—	(1,724)	(1,724)
Ending balance	₩ 453,438	₩ 55,600	₩ 509,038	₩166,080	₩ —	₩ 675,118

(2016)

Detail	Acceptances and guarantees: Individual assessment	Acceptances and guarantees: Collective assessment	Acceptances and guarantees: Subtotal	Unused loan commitments	Provision for others	Total
Beginning balance	₩ 50,761	₩ 190,958	₩ 241,719	₩151,618	₩ —	₩ 393,337
Foreign exchange translation	876	116	992	51	—	1,043
Additional provisions (Reversal of provision)	351,808	813,391	1,165,199	77,170	16,317	1,258,686
Transfers in (out)	59	(59)	—	—	—	—
Payment	—	—	—	—	(1,119)	(1,119)
Ending balance	₩403,504	₩1,004,406	₩1,407,910	₩228,839	₩15,198	₩1,651,947

18. RETIREMENT BENEFIT PLAN:

The Bank operates both defined benefit plan and defined contribution plan.

(1) Defined benefit plan

The Bank operates defined benefit plans which have the following characteristics:

- The entity has the obligation to pay the agreed benefits to all its current and past employees.
- The entity is liable for actuarial risk (excess of actual payment against expected amount) and investment risk.

The present value of the defined benefit obligation recognized in the separate statements of financial position is calculated annually by independent actuaries in accordance with actuarial valuation method. The present value of the defined benefit obligation is calculated using the Projected Unit Credit method (the 'PUC'). The data used in the PUC such as interest rates, future salary increase rate, mortality rate, consumer price index and expected return on plan asset are based on observable market data and historical data which are annually updated.

Actuarial assumptions may differ from actual results due to change in the market, economic trend and mortality trend which may affect defined benefit obligation liabilities (assets) and future payments. Actuarial gains and losses arising from changes in actuarial assumptions are recognized in the period incurred through other comprehensive income or loss.

(2) Details of net defined benefit obligation as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Present value of defined benefit obligations	₩ 79,956	₩ 72,105
Fair value of plan assets	(92,183)	(70,013)
Defined benefit liabilities (assets), net	₩(12,227)	₩ 2,092

(3) Changes in net defined benefit obligations for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

	Present value of the defined benefit obligation	Plan assets	Net defined benefit obligation
Beginning balance	₩72,105	₩(70,013)	₩ 2,092
Contributions from the employer	—	(27,100)	(27,100)
Current service cost	8,912	—	8,912
Interest expense (income)	2,612	(2,548)	64
Return on plan assets, excluding the interest expense (income)	—	1,258	1,258
Actuarial gains and losses arising from changes in financial assumptions	(3,081)	—	(3,081)
Actuarial gains and losses arising from experience adjustments	5,029	—	5,029
Management fee on plan assets	—	122	122
Benefits paid	(5,621)	6,098	477
Ending balance	₩79,956	₩(92,183)	₩(12,227)

(2016)

	Present value of the defined benefit obligation	Plan assets	Net defined benefit obligation
Beginning balance	₩ 82,504	₩(34,716)	₩ 47,788
Contributions from the employer	—	(37,693)	(37,693)
Current service cost	10,605	—	10,605
Interest expense (income)	2,955	(1,246)	1,709
Return on plan assets, excluding the interest expense (income)	—	622	622
Actuarial gains and losses arising from changes in financial assumptions	(5,127)	—	(5,127)
Actuarial gains and losses arising from experience adjustments	(16,414)	—	(16,414)
Management fee on plan assets	—	76	76
Benefits paid	(2,418)	2,944	526
Ending balance	₩ 72,105	₩(70,013)	₩ 2,092

(4) Details of plan assets as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Cash and cash equivalent	₩ 3	₩ —
Debt securities	15,073	17,337
Others	77,107	52,676
Total	₩92,183	₩70,013

(5) Actuarial assumptions used in retirement benefit obligation assessment as of December 31, 2017 and 2016 are as follows:

	Dec. 31, 2017	Dec. 31, 2016
Discount rate	3.89%	3.64%
Expected wage growth rate	2.43%	2.16%

(6) Assuming that all the other assumptions remain unchanged, the effect of changes in the significant actuarial assumptions which were made within the reasonable limit on retirement benefit obligations as of December 31, 2017 and 2016 are as follows:

(December 31, 2017)

Detail	1%p Increase	1%p Decrease
Change of discount rate	₩ (9,081)	₩10,819
Change of future salary increase rate	10,883	(9,290)

(December 31, 2016)

Detail	1%p Increase	1%p Decrease
Change of discount rate	₩ (8,745)	₩10,520
Change of future salary increase rate	10,575	(8,941)

The above sensitivity analysis does not present any actual changes in the retirement benefit obligations as there is no change in actuarial assumptions which is independently made due to the correlation among the assumptions. In addition, the actuarial present value of promised retirement benefits in the sensitivity analysis is determined using the projected unit credit method, which is used in the calculation of the retirement benefit obligations in the separate financial statements.

(7) Retirement benefit cost incurred from the defined contribution plan for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Retirement benefits	₩677	₩562

19. OTHER LIABLITIES:

Details of other liabilities as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Other financial liabilities:		
Financial guarantee contract liabilities	₩1,123,773	₩ 969,765
Foreign exchanges payable	213	43,178
Accounts payable	57,022	18,463
Accrued expenses	613,328	609,449
Guarantee deposit received	162	163
Subtotal	1,794,498	1,641,018
Other liabilities:		
Allowance for credit loss in derivatives	69,910	38,232
Unearned income	220,441	145,060
Sundry liabilities	4,101	8,334
Subtotal	294,452	191,626
Total	₩2,088,950	₩1,832,644

20. DERIVATIVES:

The Bank operates derivatives both for trading and hedging purposes. Derivatives held for trading purpose are included in financial assets and liabilities at FVTPL.

(1) Details of derivative assets and liabilities as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

		Derivative assets			
Detail	Notional	Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩38,780,733	₩ 89,305	₩—	₩329,246	₩ 418,551
Currency:					
Currency forwards	6,451,057	—	—	113,466	113,466
Currency swaps	24,518,828	138,816	—	408,516	547,332
Subtotal	30,969,885	138,816	—	521,982	660,798
Stock:					
Stock options	2,298,275	—	—	1,444	1,444
Other:					
Other derivative	—	—	—	23	23
Total	₩72,048,893	₩228,121	₩—	₩852,695	₩1,080,816

Detail	Notional	Derivative liabilities			
		Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩38,780,733	₩ 369,290	₩—	₩311,850	₩ 681,140
Currency:					
Currency forwards	6,451,057	—	—	152,478	152,478
Currency swaps	24,518,828	688,906	—	447,433	1,136,339
Subtotal	30,969,885	688,906	—	599,911	1,288,817
Stock:					
Stock options	2,298,275	—	—	—	—
Other:					
Other derivative	—	—	—	17	17
Total	₩72,048,893	₩1,058,196	₩—	₩911,778	₩1,969,974

(December 31, 2016)

Detail	Notional	Derivative assets			
		Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩34,406,712	₩163,959	₩—	₩231,219	₩395,178
Currency:					
Currency forwards	5,581,111	—	—	145,185	145,185
Currency swaps	23,132,311	4,458	—	268,794	273,252
Subtotal	28,713,422	4,458	—	413,979	418,437
Stock:					
Stock options	1,012,200	—	—	2,151	2,151
Total	₩64,132,334	₩168,417	₩—	₩647,349	₩815,766

Detail	Notional	Derivative liabilities			
		Fair value hedge	Cash flow hedge	Trading	Total
Interest:					
Interest rate swaps	₩34,406,712	₩ 281,054	₩—	₩249,051	₩ 530,105
Currency:					
Currency forwards	5,581,111	—	—	157,340	157,340
Currency swaps	23,132,311	2,054,476	—	446,308	2,500,784
Subtotal	28,713,422	2,054,476	—	603,648	2,658,124
Stock:					
Stock options	1,012,200	—	—	—	—
Total	₩64,132,334	₩2,335,530	₩—	₩852,699	₩3,188,229

(2) Gains and losses from fair value hedging instruments and hedged items attributable to the hedged risk for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Fair value hedge—hedged items	₩ 93,296	₩ 447,638
Fair value hedge—hedging instruments	1,208,424	(656,561)

(3) The Bank recognized ₩(467) million and ₩1,298 million as other comprehensive income (loss) (before tax effect), and no amount was recognized as the ineffectiveness of cash flow hedge in earnings for the years ended December 31, 2017, and ₩(95) thousand was for the years ended December 31, 2016.

21. CAPITAL STOCK:

As of December 31, 2017, the authorized capital and paid-in capital of the Bank are ₩15,000,000 million and ₩11,814,963 million, respectively. The Bank does not issue share certificates.

Changes in capital stock for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Beginning balance	₩10,398,055	₩ 8,878,055
Paid-in capital increase	1,416,908	1,520,000
Ending balance	₩11,814,963	₩10,398,055

22. OTHER COMPONENTS OF EQUITY:

(1) Details of other components of equity as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Gain on valuation of AFS securities	₩101,985	₩259,564
Gain on valuation of cash flow hedge	586	854
Remeasurement elements of net defined benefit obligation	17,168	19,599
Total	₩119,739	₩280,017

(2) Changes in other reserves for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

	Beginning balance	Increase (Decrease)	Tax effect	Ending balance
Gain on valuation of AFS securities	₩259,564	₩(179,477)	₩21,898	₩101,985
Gain on valuation of cash flow hedge	854	(467)	199	586
Remeasurement of net defined benefit obligation	19,599	(3,207)	776	17,168
Total	₩280,017	₩(183,151)	₩22,873	₩119,739

(2016)

	Beginning balance	Increase (Decrease)	Tax effect	Ending balance
Gain on valuation of AFS securities	₩116,369	₩188,913	₩(45,718)	₩259,564
Gain (Loss) on valuation of cash flow hedge	(131)	1,299	(314)	854
Remeasurement of net defined benefit obligation	3,742	20,918	(5,061)	19,599
Total	₩119,980	₩211,130	₩(51,093)	₩280,017

23. RETAINED EARNINGS:

(1) Details of retained earnings as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Legal reserve(*1)	₩328,856	₩ 328,856
Voluntary reserve(*2)	—	1,216,737
Reserve for bad loan	206,330	476,882
Unappropriated retained earnings (deficit)	172,794	(1,487,289)
Total	₩707,980	₩ 535,186

(*1) Pursuant to the EXIM Bank Act, the Bank appropriates 10% of net income for each accounting period as legal reserve, until the accumulated reserve equals to its paid-in capital.
(*2) The Bank appropriates the remaining balance of net income, after the appropriation of legal reserve and declaration of dividends, to voluntary reserve.

(2) Changes in retained earnings for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Beginning balance	₩535,186	₩ 2,027,863
Net income (loss) for the period	172,794	(1,487,289)
Dividends	—	(5,388)
Ending balance	₩707,980	₩ 535,186

(3) Details of dividends for the year ended December 31, 2017, and 2016, are as follows (Korean won in millions):

	2017	2016
The Government	₩—	₩3,981
BOK	—	707
Korea Development Bank	—	700
Total	₩—	₩5,388

(4) Statements of appropriations of retained earnings (deficit) for the years ended December 31, 2017 and 2016 are as follows (Korean Won in millions):

	2017 (Expected date of appropriation: Mar. 30, 2018)		2016 (Date of appropriation: Mar. 29, 2017)	
I.Retained earnings (deficit) before appropriations:		₩172,794		₩(1,487,288)
1.Unappropriated retained earnings carried over from prior years	₩ —		₩ —	
2.Net income (loss)	172,794		(1,487,288)	
II.Other reserve transferred		—		—
III.Appropriations:		172,794		(1,487,288)
1.Legal reserve	17,280		—	
2.Dividend	59,596		—	
3.Other reserve	—		(1,216,737)	
4.Reserve for bad loans	95,918		(270,552)	
IV.Unappropriated Retained earnings (deficit) at the end of the period		₩ —		₩ —

(5) Reserve for bad loans

Reserve for bad loans is calculated and disclosed according to Article 29 (1) and (2), Regulation on Supervision of Banking Business. In accordance with Regulation on Supervision of Banking Business etc., if the estimated allowance for credit loss determined by K-IFRS for the accounting purpose is lower than those for the regulatory purpose required by Regulation on Supervision of Banking Business, the Bank should reserve such difference as the regulatory reserve for bad loans. Due to the fact that regulatory reserve for bad loans is a voluntary reserve, the amounts that exceed the existing reserve for bad loans over the compulsory reserve for bad loans at the period-end date are reversed in profit. In case of accumulated deficit, the Bank should recommence setting aside reserve for bad loans at the time when accumulated deficit reduced to zero.

1) Reserve for bad loans

Details of reserve for bad loans as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	Dec. 31, 2017	Dec. 31, 2016
Accumulated reserve for bad loans	₩206,330	₩ 476,882
Expected reserve for bad loans	95,918	—
Expected deficit recovery	—	(270,552)
Reserve for bad loans	₩302,248	₩ 206,330

2) Required reserve for bad loans and net income after adjusting reserve for bad loans.

Details of required reserve for bad loans and net income after adjusting the reserve for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Net income (loss) for the period	₩172,794	₩(1,487,289)
Required reserve for (reversal of) bad loans	423,002	(552,906)
Net profit (loss) after adjusting the reserve for bad loans(*)	₩595,796	₩(2,040,195)

(*) Adjusted profit (loss) considering reserves for bad debt as above is calculated by assuming that the provision in reserves for bad debt before income tax is reflected in net income.

24. NET INTEREST INCOME:

Net interest income is the amount after deduction of interest expenses from interest income, and the details are as follows:

(1) Details of interest income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Interest of due from financial institutions:		
Due from financial institutions in local currency	₩ 3,318	₩ 2,158
Due from financial institutions in foreign currencies	15,195	8,410
Subtotal	18,513	10,568
Interest of financial assets at FVTPL:		
Interest of trading securities	1,554	1,855
Interest of investments:		
Interest of AFS securities	17,760	13,275
Interest of HTM securities	2,045	2,350
Subtotal	19,805	15,625
Interest of loans:		
Interest of loans in local currency	713,638	503,531
Interest of loans in foreign currencies	1,856,733	1,662,002
Interest of bills bought	25,373	15,011
Interest of advances for customers	151	140
Interest of call loans	30,817	13,948
Interest of interbank loans	12,511	3,587
Subtotal	2,639,223	2,198,219
Interest of others	4,633	5,207
Total	₩2,683,728	₩2,231,474

(2) Details of interest expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Interest of borrowings:		
Borrowings in local currency	₩ 2	₩ —
Borrowings in foreign currencies	142,225	111,543
Subtotal	142,227	111,543
Interest of call money	4,462	2,894
Interest of debentures:		
Interest of debentures in local currency	205,939	185,960
Interest of debentures in foreign currencies	1,233,202	1,098,592
Subtotal	1,439,141	1,284,552
Interest of others	17,923	17,830
Total	₩1,603,753	₩1,416,819

25. NET COMMISION INCOME:

Net commission income is the amount after deduction of commission expenses from commission income, and the details are as follows.

(1) Details of commission income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Commission income in local currency:		
Commissions income on management of EDCF	₩ 15,383	₩ 14,645
Commissions income on management of IKCF	2,279	2,277
Other commission income in local currency	—	4
Subtotal	17,662	16,926
Commission income in foreign currency:		
Commissions income on letter of credit	2,239	1,788
Commissions income on confirmation on export letter of credit	713	184
Commissions income on loans commitment	38,027	40,826
Arrangement fee	7,223	7,294
Advisory fee	2,002	803
Cancelation fee	22	—
Prepayment fee	5,299	13,854
Brokerage fee for foreign currency exchange funds	2,681	2,724
Sundry commissions income on foreign exchange	139	464
Structuring fee	9,914	3,643
Other commission income in foreign currency	2,477	304
Subtotal	70,736	71,884
Others:		
Other commission income	5,984	8,230
Guarantee fees on local currency:		
Guarantee fees on local currency	21,795	—
Guarantee fees on foreign currency:		
Guarantee fees on foreign currency	224,281	288,046
Premium for guarantee	60,644	71,622
Subtotal	284,925	359,668
Total	₩401,102	₩456,708

(2) Details of commission expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Commission expenses in local currency:		
Commissions expenses on domestic transaction	₩ 447	₩ 443
Commission expenses in foreign currency:		
Service fees paid to credit-rating agency	3,458	3,155
Sundry commission expenses on foreign exchange	1,267	795
Sundry commissions expenses on offshore transaction	1	11
Subtotal	4,726	3,961
Others:		
Other commissions expenses	4,200	4,044
Total	₩9,373	₩8,448

26. DIVIDEND INCOME:

Details of dividend income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
AFS securities	₩35,352	₩23,060
Investment in associates(*)	9,905	7,999
Total	₩45,257	₩31,059

(*) Classified as income from investments in associates.

27. GAIN (LOSS) ON FINANCIAL ASSETS AT FVTPL:

Details of gain (loss) on financial assets at FVTPL for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Trading securities:		
Gain on valuation	₩ 5,046	₩ 12,574
Loss on valuation	(808)	(2,670)
Gain on disposal	13,742	12,804
Loss on disposal	(322)	(2,540)
Subtotal	17,658	20,168
Trading derivatives:		
Gain on valuation	988,657	493,518
Loss on valuation	(845,063)	(518,897)
Gain on transaction	635,756	878,785
Loss on transaction	(533,026)	(679,161)
Subtotal	246,324	174,245
Total	₩ 263,982	₩ 194,413

28. GAIN (LOSS) ON HEDGING DERIVATIVES:

Details of gain (loss) on hedging derivatives for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Gain on hedging derivatives	₩1,456,521	₩ 308,363
Loss on hedging derivatives	(248,247)	(964,924)
Total	₩1,208,274	₩(656,561)

29. GAIN (LOSS) ON FINANCIAL INVESTMENTS:

(1) Details of gain (loss) on financial investments for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
AFS securities:		
Gain on disposal	₩20,865	₩ 7,561
Loss on disposal	(1,128)	(80)
Impairment loss	(3,594)	(8,646)
Total	₩16,143	₩(1,165)

(2) There is no gain or loss on HTM securities for the years ended December 31, 2017 and 2016, respectively. In addition, details of interest income of HTM securities are stated in Note 24.

30. OTHER OPERATING INCOME (EXPENSES):

Details of other operating income (expenses) for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Other operating income:		
Gain on disposal of loans	₩ 1,655	₩ —
Gain on fair value hedged items	277,508	541,626
Others	1,064	1,888
Subtotal	280,227	543,514
Other operating expenses:		
Loss on fair value hedged items	184,212	93,988
Contribution to miscellaneous funds	5,177	5,424
Loss on redemption	2,455	45
Transfer of other provisions	1,344	16,316
Others	32,769	37,373
Subtotal	225,957	153,146
Total	₩ 54,270	₩390,368

31. IMPAIRMENT LOSS ON CREDIT:

Details of (reversal of) impairment loss on credit for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Loans	₩1,724,192	₩1,928,597
Other financial assets	117,622	7,815
Guarantees	(879,253)	1,165,199
Unused loan commitments	(62,655)	77,170
Financial guarantee contract	180,922	54,898
Total	₩1,080,828	₩3,233,679

32. GENERAL AND ADMINISTRATIVE EXPENSES:

Details of general and administrative expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	Detail	2017	2016
General and administrative Expenses in financing department	Short-term employee benefits	₩ 99,072	₩105,026
	Office expenses	56,026	56,144
	Subtotal	155,098	161,170
Office expenses of EDCF		1,731	1,636
General and administrative—Others	Retirement benefits (defined contributions)	677	562
	Retirement benefits (defined benefits)	9,098	12,390
	Depreciation of tangible assets	8,940	7,655
	Amortization of intangible assets	9,219	5,053
	Taxes and duties	25,952	14,673
	Subtotal	53,886	41,969
	Total	₩210,715	₩203,139

33. NON-OPERATING INCOME (EXPENSES):

Details of non-operating income (expenses) for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	Detail	2017	2016
Gain (Loss) on investments in associates and subsidiaries	Dividend income	₩ 9,905	₩ 7,999
	Impairment loss	(235)	(4,415)
	Subtotal	9,670	3,584
Others income	Gain on disposal of land	—	373
	Gain on disposal of building	—	346
	Gain on disposal of tangible assets	60	63
	Reversal of impairment loss on intangible assets	50	—
	Rent income	156	159
	Interest on other loans	85	85
	Income on research project	2,912	2,110
	Indemnity received for breach of contact A/C	5	1
	Other miscellaneous Income	1,790	11,982
	Subtotal	5,058	15,119
Others expenses	Loss on disposal of tangible assets	5	14
	Loss on disposal of intangible assets	20	—
	Impairment loss on intangible assets	217	538
	Expenses for contribution	3,117	3,235
	Court cost	3,571	3,002
	Expenses on research project	7,202	4,944
	Other miscellaneous expenses	1,082	7,350
	Subtotal	15,214	19,083
	Total	₩(10,156)	₩ (3,964)

34. INCOME TAX EXPENSE (BENEFIT):

(1) Details of income tax expense (benefit) for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Current income tax payable	₩ 8	₩ —
Adjustment recognized in the period for current tax of prior periods	—	(4,203)
Changes in deferred income taxes due to temporary differences	33,177	(415,599)
Changes in deferred income taxes directly recognized in equity	22,873	(51,094)
Income tax expense (benefit)	₩56,058	₩(470,896)

(2) Changes in temporary differences and deferred income tax assets (liabilities) for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

(2017)

Detail	Temporary differences			Deferred tax assets (liabilities)—ending balance
	Beginning balance	Increase (Decrease)	Ending balance	
Depreciation	₩ 82	₩ —	₩ 82	₩ 20
Fair value hedging income (loss)	(123,217)	(79,921)	(203,138)	(49,159)
Financial guarantee contract liability	805,555	137,961	943,516	228,331
Loans	(196,157)	(181,567)	(377,724)	(91,409)
Allowance for loan losses	208,405	463,449	671,854	162,589
Unused commitment provisions	228,839	(62,759)	166,080	40,191
Net deferred origination fees and costs	426,935	(28,822)	398,113	96,343
Long-term income in advance	(6,216)	309	(5,907)	(1,430)
Provisions for acceptances and guarantees	1,407,910	(898,873)	509,037	123,187
Loan-for-equity swap	1,723,573	(3,734)	1,719,839	416,201
Loss on valuation of derivatives	(2,286,929)	1,354,342	(932,587)	(225,686)
Gain on valuation of derivatives	2,375,073	(1,493,790)	881,283	213,271
Defined benefit liability	(1,061)	(14,979)	(16,040)	(3,882)
Accrued interest and interest receivables related to swap transaction	(293,700)	74,517	(219,183)	(53,042)
Tangible assets	(176,588)	1,430	(175,158)	(42,388)
Others	215,931	11,215	227,146	54,968
Loss carried forward	851,792	490,078	1,341,870	324,733
Subtotal	5,160,227	(231,144)	4,929,083	1,192,838
Deferred income tax assets (liabilities) directly adjusted in equity				(66,639)
Total				₩1,126,199

(2016)

Detail	Temporary differences: Beginning balance	Increase (Decrease)	Ending balance	Deferred tax assets (liabilities)—ending balance
Depreciation	₩ —	₩ 82	₩ 82	₩ 20
Fair value hedging income (loss)	307,106	(430,323)	(123,217)	(29,818)
Financial guarantee contract liability	660,653	144,902	805,555	194,944
Loans	—	(196,157)	(196,157)	(47,470)
Allowance for loan losses	662,184	(453,779)	208,405	50,434
Unused commitment provisions	151,618	77,221	228,839	55,379
Net deferred origination fees and costs	446,118	(19,183)	426,935	103,318
Long-term income in advance	(16,534)	10,318	(6,216)	(1,504)
Provisions for acceptances and guarantees	241,719	1,166,191	1,407,910	340,714
Loan-for-equity swap	1,203,226	520,347	1,723,573	417,105
Loss on valuation of derivatives	(3,081,608)	794,679	(2,286,929)	(553,437)
Gain on valuation of derivatives	2,803,407	(428,334)	2,375,073	574,768
Defined benefit liability	43,282	(44,343)	(1,061)	(257)
Accrued interest and interest receivables related to swap transaction	(294,246)	546	(293,700)	(71,075)
Tangible assets	(178,007)	1,419	(176,588)	(42,734)
Others	213,179	2,752	215,931	52,254
Loss carried forward	69,646	782,146	851,792	206,134
Subtotal	3,231,743	1,928,484	5,160,227	1,248,775
Deferred income tax assets (liabilities) directly adjusted in equity				(89,399)
Total				₩1,159,376

(3) Details of the reconciliation between net income (loss) before income tax and income tax expense (benefit) for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Income (Loss) before income tax	₩228,852	₩(1,958,185)
Income tax expense (benefit) calculated at statutory tax rate (Corporate tax rate: 11% up to ₩200 million, 22% over ₩200 million to ₩20 billion and 24.2% over ₩20 billion)	54,920	(473,418)
Adjustments:		
Non-taxable income	(1,215)	(342)
Non-deductible expense	362	6,198
Unrecognized temporary differences	57	1,068
Others	6,302	318
	5,506	7,242
Adjustment recognized in the period for current tax of prior periods	(4,368)	(4,720)
Income tax expense (benefit)	₩ 56,058	₩ (470,896)
Effective tax rate(*)	24.50%	—

(*) The Bank had net loss before income tax during the year ended December 31, 2016, hence the Bank did not calculate the average effective tax rate from operation.

(4) Details of deferred tax relating to items that are recognized directly in equity as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	Dec. 31, 2017	Dec. 31, 2016
Loss on valuation of AFS securities	₩(60,971)	₩(82,869)
Loss on valuation of cash flow hedge	(187)	(272)
Remeasurement of net defined benefit liability	(5,481)	(6,257)
Total	₩(66,639)	₩(89,398)

(5) Unrecognized deferred tax assets and liabilities

The Bank does not recognize deferred tax liabilities for taxable temporary difference of ₩48,818 million related to investments in associates and subsidiaries as of December 31, 2017 because the Bank is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The Bank also does not recognize deferred tax assets for deductible temporary differences of ₩4,469 million related to impairment loss of AFS securities as of December 31, 2017 because the realizable period has already passed.

35. STATEMENTS OF CASH FLOWS:

(1) Details of non-cash flow transactions for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	2017	2016
Loan-for-equity swap	₩ —	₩ 35,009
Investment in kind	1,416,908	500,000
Gain (Loss) on valuation of AFS securities	(179,477)	188,914
Remeasurement of net defined benefit liability	3,207	21,740

(2) Changes in liabilities arising from financing activities for the year ended December 31, 2017 are as follows (Korean won in millions):

Detail	Borrowings	Debentures	Total
Beginning balance	₩ 9,761,389	₩62,119,016	₩71,880,405
Change in cash flows	(2,739,482)	3,285,396	545,914
Amortization	3,137	161,295	164,432
Foreign exchange transaction	(1,011,587)	(4,781,714)	(5,793,301)
Change in fair value hedged items	—	(98,895)	(98,895)
Ending balance	₩ 6,013,457	₩60,685,098	₩66,698,555

36. CONTINGENT LIABILITIES AND COMMITMENTS:

(1) Details of contingent liabilities and commitments as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail		Dec. 31, 2017	Dec. 31, 2016
Guarantees	Confirmed	₩38,960,799	₩53,615,073
	Unconfirmed	3,847,975	6,063,975
	Subtotal	42,808,774	59,679,048
Loan commitments	Local currency, foreign currency loan commitments	17,996,772	18,571,869
	Others	1,825,727	1,758,176
	Subtotal	19,822,499	20,330,045
	Total	₩62,631,273	₩80,009,093

(2) Details of guarantees that have been provided for others as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail		Dec. 31, 2017	Dec. 31, 2016
Confirmed guarantees	Local currency:		
	Performance of contracts	₩ 50,709	₩ 71,301
	Repayment of advances	227,091	43,536
	Others	602,187	384,223
	Subtotal	879,987	499,060
	Foreign currency:		
	Performance of contracts	10,096,151	13,989,701
	Repayment of advances	11,091,318	20,239,595
	Acceptances of imported goods	3,277	1,245
	Acceptances of import letter of credit outstanding	89,480	172,857
	Foreign liabilities	10,964,999	11,547,142
	Others	5,835,587	7,165,473
	Subtotal	38,080,812	53,116,013
Unconfirmed guarantees	Foreign liabilities	1,569,782	1,337,732
	Repayment of advances	2,243,202	4,549,899
	Performance of contracts	33,793	159,687
	Underwriting of import credit	1,163	16,617
	Others	35	40
	Subtotal	3,847,975	6,063,975
	Total	₩42,808,774	₩59,679,048

(3) Details of guarantees classified by country as of December 31. 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail		Confirmed guarantees		Unconfirmed guarantees		Total	
		Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Asia	Korea	₩26,140,921	67.10	₩2,197,447	57.11	₩28,338,368	66.20
	Saudi Arabia	1,914,178	4.91	—	—	1,914,178	4.47
	India	441,562	1.13	78,704	2.05	520,266	1.22
	Indonesia	970,827	2.49	122,053	3.17	1,092,880	2.55
	Vietnam	960,748	2.47	301,267	7.83	1,262,015	2.95
	Australia	697,324	1.79	50,666	1.32	747,990	1.75
	Philippines	126,536	0.32	8,614	0.22	135,150	0.32
	Qatar	290,789	0.75	—	—	290,789	0.68
	Oman	326,291	0.84	75,970	1.97	402,261	0.94
	Others	983,640	2.52	117,139	3.04	1,100,779	2.56
	Subtotal	32,852,816	84.32	2,951,860	76.71	35,804,676	83.64
Europe	United Kingdom	329,506	0.85	—	—	329,506	0.77
	France	394,781	1.01	52,095	1.35	446,876	1.04
	Uzbekistan	280,884	0.72	1,163	0.03	282,047	0.66
	Others	449,278	1.15	184,849	4.80	634,127	1.48
	Subtotal	1,454,449	3.73	238,107	6.18	1,692,556	3.95
America	United States	2,348,208	6.03	194,670	5.06	2,542,878	5.94
	Brazil	471,757	1.21	—	—	471,757	1.10
	Mexico	265,381	0.68	1,942	0.05	267,323	0.62
	Bermuda	191,686	0.49	—	—	191,686	0.45
	Others	281,531	0.72	33,958	0.88	315,489	0.74
	Subtotal	3,558,563	9.13	230,570	5.99	3,789,133	8.85
Africa	Madagascar	159,293	0.41	—	—	159,293	0.37
	Marshall Islands	568,553	1.46	—	—	568,553	1.33
	Others	367,125	0.95	427,438	11.12	794,563	1.86
	Subtotal	1,094,971	2.82	427,438	11.12	1,522,409	3.56
	Total	₩38,960,799	100.00	₩3,847,975	100.00	₩42,808,774	100.00

(December 31, 2016)

Detail		Confirmed guarantees		Unconfirmed guarantees		Total	
		Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Asia	Korea	₩39,410,253	73.51	₩4,706,038	77.61	₩44,116,291	73.92
	Saudi Arabia	2,279,926	4.25	—	—	2,279,926	3.82
	India	550,354	1.03	49,334	0.81	599,688	1.00
	Indonesia	1,145,558	2.14	15,579	0.26	1,161,137	1.95
	Vietnam	1,042,485	1.94	442,065	7.29	1,484,550	2.49
	Australia	839,002	1.56	57,149	0.94	896,151	1.50
	Philippines	347,199	0.65	3,588	0.06	350,787	0.59
	Qatar	351,311	0.66	—	—	351,311	0.59
	Singapore	18,629	0.03	—	—	18,629	0.03
	Oman	306,690	0.57	157,827	2.60	464,517	0.78
	Others	566,106	1.06	144,818	2.39	710,924	1.19
	Subtotal	46,857,513	87.40	5,576,398	91.96	52,433,911	87.86
Europe	United Kingdom	409,953	0.76	—	—	409,953	0.69
	France	484,456	0.90	103,897	1.71	588,353	0.99
	Uzbekistan	397,164	0.74	50,318	0.83	447,482	0.75
	Others	196,489	0.37	71,302	1.18	267,791	0.45
	Subtotal	1,488,062	2.77	225,517	3.72	1,713,579	2.88
America	United States	2,659,726	4.96	191,982	3.17	2,851,708	4.78
	Brazil	566,466	1.06	532	0.01	566,998	0.95
	Mexico	315,010	0.59	2,191	0.04	317,201	0.53
	Bermuda	235,275	0.44	—	—	235,275	0.39
	Others	347,805	0.65	45,998	0.76	393,803	0.66
	Subtotal	4,124,282	7.70	240,703	3.98	4,364,985	7.31
Africa	Madagascar	179,677	0.33	—	—	179,677	0.30
	Marshall Islands	657,903	1.23	—	—	657,903	1.10
	Others	307,636	0.57	21,357	0.34	328,993	0.55
	Subtotal	1,145,216	2.13	21,357	0.34	1,166,573	1.95
	Total	₩53,615,073	100.00	₩6,063,975	100.00	₩59,679,048	100.00

(4) Details of guarantees classified by industry as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail	Confirmed guarantees		Unconfirmed guarantees		Total	
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Manufacturing	₩18,577,567	47.68	₩3,087,986	80.25	₩21,665,553	50.61
Transportation	1,850,655	4.75	56,203	1.46	1,906,858	4.45
Finance	2,051,157	5.26	1,163	0.03	2,052,320	4.79
Wholesale and retail	863,844	2.22	217,253	5.65	1,081,097	2.53
Property related business	353,741	0.91	59,345	1.54	413,086	0.96
Construction	9,251,902	23.75	22,135	0.58	9,274,037	21.67
Public and others	6,011,933	15.43	403,890	10.49	6,415,823	14.99
Total	₩38,960,799	100.00	₩3,847,975	100.00	₩42,808,774	100.00

(December 31, 2016)

Detail	Confirmed guarantees		Unconfirmed guarantees		Total	
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Manufacturing	₩26,653,851	49.71	₩4,992,780	82.34	₩31,646,631	53.03
Transportation	2,176,509	4.06	159,308	2.63	2,335,817	3.91
Finance	2,166,443	4.04	16,777	0.28	2,183,220	3.66
Wholesale and retail	1,593,684	2.97	61,393	1.01	1,655,077	2.77
Property related business	540,841	1.01	—	—	540,841	0.91
Construction	12,489,998	23.30	107,003	1.76	12,597,001	21.11
Public and others	7,993,747	14.91	726,714	11.98	8,720,461	14.61
Total	₩53,615,073	100.00	₩6,063,975	100.00	₩59,679,048	100.00

(5) Global Medium-Term Note Program (“GMTN”) and Commercial Paper (“CP”) programs

The Bank has been establishing the following programs regarding the issue of foreign currency bonds and CPs:

1) Established on August 1, 1991, initially, and annually renewed, U.S. Shelf Registration to issue foreign bonds under the Securities and Exchange Commission rule of the United States of America with an issuance limit of USD 50 billion;
2) Established on May 14, 1997 and May 16, 1997, initially, and annually renewed, CP program to issue CPs with issuance limits of USD 6 billion and USD 2 billion, respectively;
3) Established on November 6, 1997, initially, and annually renewed, Euro Medium-Term Note Program to issue mid-to-long-term foreign currency bonds with an issuance limit of USD 25 billion;
4) Established on March 12, 2008 and February 2, 2012, initially, and renewed, MYR MTN program to issue Malaysian Ringgit-denoted bonds with issuance limits of MYR 3 billion and 1 billion respectively.
5) Established on 1995, initially, and renewed every two years, Yen Shelf Registration to issue Samurai bond with an issuance limit of JPY 500 billion;
6) Established on May 31, 2010, Australian Domestic Debt Issuance Program to issue Kangaroo bond with limit of AUD 4 billion;
7) Established on January 17, 2011, and renewed every two years, Uridashi Shelf Registration to issue Uridashi bond with an issuance limit of JPY 500 billion.

(6) Pending litigations

As of December 31, 2017, 10 lawsuits (aggregated claim amount: ₩162,892 million) were filed as a plaintiff and 9 pending litigations as a defendant were filed (aggregated claim amount: ₩124,535 million). The Bank’s management expects that there is no significant impact on the financial statements due to these lawsuits but it is possible to make additional loss to the Bank due to the results of future litigation.

(7) Written-off loans

The Bank manages written-off loans that have claims on debtors due to the limitation of statute, uncollected after write-off, etc. The written-off loans as of December 31, 2017 and 2016 are ₩1,385,885 million and ₩1,300,714 million, respectively.

37. TRANSACTIONS AND BALANCES WITH RELATED PARTIES:

Related parties consist of entities related to the Bank, post-employment benefits, a key management personnel and a close member of that person's family, an entity controlled or jointly controlled and an entity influenced significantly.

(1) Details of related parties as of December 31, 2017 are as follows:

Detail	Relationship	Percentage (%)
Parent:		
Korean government	Parent	66.27
Subsidiaries and Associates:		
KEXIM Bank UK Limited	Subsidiary	100.00
PT.KOEXIM Mandiri Finance	Subsidiary	85.00
KEXIM Vietnam Leasing Co.	Subsidiary	100.00
KEXIM Asia Limited	Subsidiary	100.00
Korea Asset Management Corporation	Associate	25.86
Credit Guarantee and Investment Fund	Associate	14.29
Korea Marine Guarantee Inc.	Associate	41.88
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	Associate	81.25
DAESUN Shipbuilding & Engineering Co., Ltd.	Associate	67.30
KTB Newlake Global Healthcare PEF	Associate	25.00
KBS-KDB Private Equity Fund	Associate	20.83
Korea Shipping and Maritime Transportation	Associate	40.00
Korea Aerospace Industries. Ltd.	Associate	26.41

(2) Significant balances of receivables, payables and guarantees with the related parties

1) Significant balances of receivables and payables with the related parties as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail	Receivables	Allowance /Provisions	Payables
Subsidiaries:			
KEXIM Bank UK Limited	₩ 136,805	₩ —	₩ 93
PT.KOEXIM Mandiri Finance	145,109	227	—
KEXIM Vietnam Leasing Co.	122,994	195	—
KEXIM Asia Limited	121,267	58	59
Subtotal	526,175	480	152
Associates:			
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	1,931,974	1,590,951	—
DAESUN Shipbuilding & Engineering Co., Ltd.	459,156	284,443	41,743
Subtotal	2,391,130	1,875,394	41,743
Total	₩2,917,305	₩1,875,874	₩41,895

(December 31, 2016)

Detail	Receivables	Allowance /Provisions	Payables
Subsidiaries:			
KEXIM Bank UK Limited	₩ 146,398	₩ —	₩ 12
PT.KOEXIM Mandiri Finance	139,349	231	—
KEXIM Vietnam Leasing Co.	144,758	217	—
KEXIM Asia Limited	139,390	—	55
Subtotal	569,895	448	67
Associates:			
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	2,067,494	752,585	—
DAESUN Shipbuilding & Engineering Co., Ltd.	387,691	239,280	25,266
Subtotal	2,455,185	991,865	25,266
Total	₩3,025,080	₩992,313	₩25,333

2) Guarantees provided to the related parties as of December 31, 2017 and 2016 are as follows (Korean won in millions):

(December 31, 2017)

Detail	Confirmed guarantees	Unconfirmed guarantees	Loans commitments	Other commitments
Subsidiaries:				
KEXIM Bank UK Limited	₩ —	₩ —	₩202,495	₩15,000
PT.KOEXIM Mandiri Finance	—	—	16,071	—
KEXIM Vietnam Leasing Co.	—	—	16,071	—
KEXIM Asia Limited	—	—	88,766	20,892
Subtotal	—	—	323,403	35,892
Associates:				
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	25,997	98,061	210,000	—
DAESUN Shipbuilding & Engineering Co., Ltd.	92,812	77,425	—	—
Subtotal	118,809	175,486	210,000	—
Total	₩118,809	₩175,486	₩533,403	₩35,892

(December 31, 2016)

Detail	Confirmed guarantees	Unconfirmed guarantees	Loans commitments	Other commitments
Subsidiaries:				
KEXIM Bank UK Limited	₩ 24,170	₩ —	₩238,075	₩16,919
PT.KOEXIM Mandiri Finance	—	—	42,298	—
KEXIM Vietnam Leasing Co.	—	—	12,085	—
KEXIM Asia Limited	—	—	77,765	42,902
Subtotal	24,170	—	370,223	59,821
Associates:				
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	714,437	144,446	44,000	—
DAESUN Shipbuilding & Engineering Co., Ltd.	88,731	54,477	13,671	—
Subtotal	803,168	198,923	57,671	—
Total	₩827,338	₩198,923	₩427,894	₩59,821

(3) Profit and loss on transactions with related parties

Profit and loss on transactions with related parties for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017			2016		
Detail	Revenue	Provision for allowance	Expenses	Revenue	Provision for allowance	Expenses
Subsidiaries:						
KEXIM Bank UK Limited	₩ 2,149	₩ —	₩535	₩ 2,394	₩ —	₩ 363
PT.KOEXIM Mandiri Finance	2,293	(4)	—	1,603	4	—
KEXIM Vietnam Leasing Co.	2,191	(22)	1	1,832	1	—
KEXIM Asia Limited	2,385	58	116	2,152	—	448
Subtotal	9,018	32	652	7,981	5	811
Associates:						
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	82,413	887,790	—	210,703	440,713	2,743
DAESUN Shipbuilding & Engineering Co., Ltd.	49,297	49,047	59	7,042	9,089	8
Subtotal	131,710	936,837	59	217,745	449,802	2,751
Total	₩140,728	₩936,869	₩711	₩225,726	₩449,807	₩3,562

(4) Money dealing with related parties

Money dealing with related parties for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017		2016	
	Financing transaction		Financing transaction	
Detail	Loan	Collection	Loan	Collection
Subsidiaries:				
KEXIM Bank UK Limited	₩ 240,458	₩ 231,744	₩ 304,543	₩ 316,538
PT.KOEXIM Mandiri Finance	297,385	275,019	268,612	270,885
KEXIM Vietnam Leasing Co.	209,031	214,802	355,063	359,067
KEXIM Asia Limited	320,952	315,549	314,651	314,859
Associates:				
SUNGDONG Shipbuilding & Marine Engineering Co., Ltd.	34,000	216,503	884,377	10,000
DAESUN Shipbuilding & Engineering Co., Ltd.	99,450	—	16,701	12,810
Total	₩1,201,276	₩1,253,617	₩2,143,947	₩1,284,159

(5) Details of compensation to key management for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Detail	2017	2016
Short-term employee benefits	₩2,418	₩2,473
Retirement benefits	162	153
Total	₩2,580	₩2,626

38. APPROVAL OF FINANCIAL STATEMENTS:

The financial statements of the Bank were approved by board of directors on March 29, 2018, and were finally approved by the Operations Committee on March 30, 2018.

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