OFFERING CIRCULAR

Korea Resources Corporation

(a statutory juridical corporation established under the laws of the Republic of Korea)

US$3,000,000,000

Global Medium Term Note Program

This Offering Circular replaces and supersedes the Offering Circular dated April 22, 2015 describing the Program (as defined below). Any Notes (as defined below) issued under this Program on or after the date of this Offering Circular are issued subject to the provisions described herein. The provisions herein do not affect any Notes issued prior to the date of this Offering Circular.

Under this US$3,000,000,000 Global Medium Term Note Program (the "Program"), Korea Resources Corporation (the "Company") or any subsidiary of the Company which accedes to the Program by executing an accession agreement pursuant to the terms of the Agency Agreement (as defined below) (each such subsidiary, a "Guaranteed Issuer," and together with the Company, each an "Issuer" in relation to the Notes issued by it) may from time to time issue notes (the "Notes") denominated in any currency agreed between the Issuer and the relevant Dealer(s) (as defined below).

The Notes may be issued in bearer or registered form (respectively, "Bearer Notes" and "Registered Notes"). Notes issued by the Guaranteed Issuers will be guaranteed by the Company (in such capacity, the "Guarantor"). The maximum aggregate nominal amount of all Notes from time to time outstanding under the Program will not exceed US$3,000,000,000 (or its equivalent in other currencies calculated as described herein), subject to increase as described herein.

The Notes may be issued on a continuing basis to one or more of the Dealers specified under "Summary of the Program" and any additional Dealer appointed under the Program from time to time by the Issuer (each a "Dealer" and together, the "Dealers"), which appointment may be for a specific issue or on an ongoing basis. References in this Offering Circular to the "relevant Dealer" shall, in the case of an issue of Notes being (or intended to be) subscribed by more than one Dealer, be to all Dealers agreeing to purchase such Notes.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "Singapore Stock Exchange") in connection with the Program and application will be made for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. Such permission will be granted when such Notes have been admitted for listing and quotation on the Singapore Stock Exchange. Notice of the aggregate nominal amount of Notes, interest (if any) payable in respect of Notes, the issue price of Notes and any other terms and conditions not contained herein that are applicable to each Tranche (as defined under "Terms and Conditions of the Notes") of Notes will be set out in a pricing supplement (the "Pricing Supplement") which, with respect to Notes to be listed on the Singapore Stock Exchange, will be submitted to the Singapore Stock Exchange before the date of listing of the Notes of such Tranche.

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

The Program provides that the Notes may be listed or admitted to trading on such other or further stock exchange(s) as may be agreed among the Issuer, the Guarantor (if applicable) and the relevant Dealer. The Issuer may also issue unlisted Notes.

See "Risk Factors" for a discussion of certain factors to be considered in connection with an investment in the Notes.

Neither the Notes nor the Guarantee has been registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"), or any state securities laws and, unless so registered, may not be offered or sold, except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and applicable state securities laws. Accordingly, the Notes will be offered and sold (a) in the United States, only to "qualified institutional buyers" (as defined in Rule 144A under the Securities Act) or to "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions and (b) in "offshore transactions" to persons other than "U.S. persons" (each as defined in Regulation S under the Securities Act). See "Subscription and Sale and Transfer and Selling Restrictions."

The Issuer and the Guarantor may agree with any Dealer that the Notes may be issued in a form not contemplated by the Terms and Conditions of the Notes herein, in which event (in the case of Notes intended to be listed on the Singapore Stock Exchange) a supplementary Offering Circular, if appropriate, will be submitted to the Singapore Stock Exchange and made available which will describe the effect of the agreement reached in relation to such Notes.

Arranger

Citigroup

Dealers

BNP PARIBAS
BofA Merrill Lynch
Citigroup
Crédit Agricole CIB
HSBC
J.P. Morgan
UBS

The date of this Offering Circular is April 14, 2017.

The Company (in its capacity as the Issuer or, in the case of Senior Guaranteed Notes, as the Guarantor) and the Guaranteed Issuers, having made all reasonable enquiries, confirm that this Offering Circular contains or incorporates all information which is material in the context of the issuance and offering of the Notes, that the information contained or incorporated in this Offering Circular is true and accurate in all material respects and is not misleading in any material respect, that the opinions and intentions expressed in this Offering Circular are honestly held and have been reached after considering all relevant circumstances and are based on reasonable assumptions, and that there are no other facts, the omission of which would, in the context of the issue and offering of the Notes, make this Offering Circular as a whole or any information or the expression of any opinions or intentions expressed in this Offering Circular misleading in any material respect. The Company and the Guaranteed Issuers accept responsibility accordingly. Information provided in this Offering Circular with respect to Korea, its political status and economy has been derived from information published by the Korean government and other public sources, and the Company and the Guaranteed Issuers accept responsibility only for the accurate extraction of information from such sources.

This Offering Circular is to be read in conjunction with all documents that are deemed to be incorporated herein by reference (see "Documents Incorporated by Reference" below). This Offering Circular shall be read and construed on the basis that such documents are incorporated and form part of this Offering Circular.

The Dealers have not separately verified the information contained herein. No representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by the Dealers as to the accuracy or completeness of the information contained or incorporated in this Offering Circular or any other information provided by the Company or the Guaranteed Issuers in connection with the Program or the Notes or their distribution. No Dealer accepts any responsibility or liability in relation to the information contained or incorporated by reference in this Offering Circular or any other information provided by the Company or the Guaranteed Issuers in connection with the Program.

No person is or has been authorized by the Company or the Guaranteed Issuers to give any information or to make any representation not contained in or not consistent with this Offering Circular or any other information supplied in connection with the Program or the Notes and, if given or made, such information or representation must not be relied upon as having been authorized by any of the Company, the Guaranteed Issuers or the Dealers.

Neither this Offering Circular nor any other information supplied in connection with the Program or any Notes (a) is intended to provide the basis of any credit or other evaluation or (b) should be considered as a recommendation by any of the Company, the Guaranteed Issuers or the Dealers that any recipient of this Offering Circular or any other information supplied in connection with the Program or any Notes should purchase any Notes. Each investor contemplating purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the applicable Issuer and the Guarantor (if applicable). Neither this Offering Circular nor any other information supplied in connection with the Program or the issue of any Notes constitutes an offer or invitation by or on behalf of any of the Company, the Guaranteed Issuers or the Dealers to any person to subscribe for or to purchase any Notes.

Neither the delivery of this Offering Circular nor the offering, sale or delivery of any Notes shall in any circumstances imply that the information contained herein concerning the Company and the Guaranteed Issuers is correct at any time subsequent to the date hereof or that any other information supplied in connection with the Program is correct as of any time subsequent to the date indicated in the document containing the same. The Dealers expressly do not undertake to review the financial condition or affairs of the Company or the Guaranteed Issuers during the life of the Program or to advise any investor in the Notes of any information coming to their attention. Investors should review, inter alia, the most recently published documents incorporated by reference into this Offering Circular when deciding whether or not to purchase any Notes.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its territories or to United States persons, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code and the regulations promulgated thereunder.

This Offering Circular does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this Offering Circular and the offer or sale of the Notes may be restricted by law in certain jurisdictions. The Company, the Guaranteed Issuers and the Dealers do not represent that this Offering Circular may be lawfully distributed, or that any Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Company, the Guaranteed Issuers or the Dealers that would permit a public offering of any Notes or distribution of this document in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this Offering Circular nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations.

Persons into whose possession this Offering Circular or any Notes may come must inform themselves about, and observe, any such restrictions on the distribution of this Offering Circular and the offering and sale of the Notes. In particular, there are restrictions on the distribution of this Offering Circular and the offer or sale of Notes in the United States of America, the European Economic Area (the "EEA"), the United Kingdom, Japan, Hong Kong, Singapore and Korea. See "Subscription and Sale and Transfer and Selling Restrictions."

In making an investment decision, investors must rely on their own examination of the applicable Issuer and the Guarantor (if applicable) and the terms of the Notes being offered, including the merits and risks involved. The Notes have not been approved or disapproved by the U.S. Securities and Exchange Commission or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this Offering Circular or confirmed the accuracy or determined the adequacy of the information contained in this Offering Circular. Any representation to the contrary is unlawful.

PROHIBITION OF SALES TO EEA RETAIL INVESTORS: each Dealer has agreed that from January 1, 2018 it will not offer, sell or otherwise make available any Notes which are products that fall within the scope of Article 2(1) of Regulation (EU) No 1286/2014 in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision, the expression "retail investor" means a person who is one (or more) of the following: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "MiFID II"); or (ii) a customer within the meaning of Directive 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; or (iii) not a qualified investor as defined in the Prospectus Directive (as defined below); and the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe the Notes.

This Offering Circular has been prepared on the basis that, except to the extent sub-paragraph (ii) below may apply, any offer of Notes in any Member State of the EEA which has implemented the Prospectus Directive (each, a "Relevant Member State") will be made pursuant to an exemption under the Prospectus Directive, as implemented in that Relevant Member State, from the requirement to publish a prospectus for offers of Notes. Accordingly any person making or intending to make an offer in that Relevant Member State of Notes which are the subject of an offering contemplated in this Offering Circular as completed by final terms in relation to the offer of those Notes may only do so (i) in circumstances in which no obligation arises for the Company, the Guaranteed Issuers or any Dealer to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive, in each case, in relation to such offer, or (ii) if a prospectus for such offer has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State and (in either case) published, all in accordance with the Prospectus Directive, provided that any such prospectus has subsequently been completed by final terms which specify that offers may be made other than pursuant to Article 3(2) of the Prospectus Directive in that Relevant Member State and such offer is made in the period beginning and ending on the dates specified for such purpose in such prospectus or final terms, as applicable, and the Company or the Guaranteed Issuer, as applicable, has consented in writing to its use for the purpose of such offer. Except to the extent sub-paragraph (ii) above may apply, none of the Company, the Guaranteed Issuers nor any Dealer has authorized, nor do they authorize, the making of any offer of Notes in circumstances in which an obligation arises for the Company, the Guaranteed Issuers or any Dealer to publish or supplement a prospectus for such offer.

For the purposes of the foregoing paragraph, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

This Offering Circular is only being distributed to and is only directed at (i) persons who are outside the United Kingdom or (ii) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (iii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). The Notes will only be available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such Notes will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this Offering Circular or any of its contents.

None of the Dealers, the Company or the Guaranteed Issuers makes any representation to any investor regarding the legality of its investment in the Notes under any applicable laws. The contents of this Offering Circular should not be construed as providing legal, business, accounting or tax advice. Any investor should be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

U.S. INFORMATION

This Offering Circular is being submitted on a confidential basis in the United States to a limited number of QIBs or Institutional Accredited Investors (each as defined under "Form of the Notes") for informational use solely in connection with the consideration of the purchase of the Notes being offered hereby. Its use for any other purpose in the United States is not authorized. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

The Registered Notes may be offered or sold within the United States only to QIBs or to Institutional Accredited Investors, in either case in transactions exempt from registration under the Securities Act. Each U.S. purchaser of the Registered Notes is hereby notified that the offer and sale of any Registered Notes to it may be being made in reliance upon the exemption from the registration requirements of the Securities Act provided by Rule 144A under the Securities Act ("Rule 144A").

Purchasers of the Definitive IAI Registered Notes will be required to execute and deliver an IAI Investment Letter (each as defined under "Terms and Conditions of the Notes"). Each purchaser or holder of the Definitive IAI Registered Notes, the Notes represented by a Rule 144A Global Note (as defined below) or any Notes issued in registered form in exchange or substitution therefor (together "Legended Notes") will be deemed, by its acceptance or purchase of any such Legended Notes, to have made certain representations and agreements intended to restrict the resale or other transfer of such Notes as set out in "Subscription and Sale and Transfer and Selling Restrictions." Unless otherwise stated, terms used in this paragraph have the meanings given to them in "Form of the Notes."

AVAILABLE INFORMATION

To permit compliance with Rule 144A in connection with any resales or other transfers of Notes that are "restricted securities" within the meaning of the Securities Act, each of the Issuers and the Guarantor (if applicable) will be required to furnish, upon request, to a holder of the Notes and a prospective investor designated by such holder, the information required to be delivered under Rule 144A(d)(4) under the Securities Act unless at the time of the request the Issuer or the Guarantor, as the case may be, is a reporting company under Section 13 or Section 15(d) of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), or is exempt from the registration requirements of Section 12(g) of the Exchange Act (and therefore is required to publish on its website, in English, certain information pursuant to Rule 12g3-2(b) under the Exchange Act).

PRESENTATION OF FINANCIAL INFORMATION

The audited annual consolidated financial statements of the Company as of and for years ended December 31, 2014, 2015 and 2016 have been prepared in accordance with Government Accounting Standards for Public Enterprises and Quasi-government Organizations of the Republic of Korea ("Government Accounting Standards"), and where accounting provisions have not been specified under Government Accounting Standards, the Company has also applied International Financial Reporting Standards as adopted by the Republic of Korea ("K-IFRS") as allowed under Government Accounting Standards. Such accounting standards differ in certain significant respects from generally accepted accounting principles in other countries, including the United States. Unless expressly stated otherwise, all financial and other information in the Offering Circular regarding the Company's activities, financial condition and results of operations are presented on a consolidated basis.

CERTAIN DEFINED TERMS AND CONVENTIONS

All references to "Korea" and the "Republic" contained in this Offering Circular shall mean The Republic of Korea. All references to the "Government" shall mean the government of Korea. All references to the "Company," the "Guarantor" or "KORES" shall mean Korea Resources Corporation, a statutory juridical entity established under the Korea Resources Corporation Act of 1967, as amended (the "KORES Act"), or Korea Resources Corporation and its consolidated subsidiaries collectively, as indicated or as required by context. All references to "Guaranteed Issuers" shall mean the subsidiaries of Korea Resources Corporation that have acceded to the Program by executing an accession agreement pursuant to the terms of the Agency Agreement, and all references to "Issuers" herein shall mean Korea Resources Corporation and the Guaranteed Issuers. All references to "MMB" in this Offering Circular are references to Minera y Metalúrgica del Boleo, S.A.P.I. de C.V. and its consolidated subsidiaries. All references to "U.S." and the "United States" shall mean the United States of America. In this Offering Circular, all references to "Won" or "₩" are to the lawful currency of Korea, all references to "U.S. dollar," or "US$" are to the lawful currency of the United States, all references to "euro" or "€" are to the lawful currency of the European Economic and Monetary Union, all references to "Mexican peso" are to the lawful currency of the United Mexican State, all references to "Japanese yen" are to the lawful currency of Japan, all references to "Australian dollar" are to the lawful currency of the Commonwealth of Australia, all references to "Canadian dollar" are to the lawful currency of Canada and all references to "S$" are to the lawful currency of Singapore. For the reader's convenience, certain Won amounts in this Offering Circular have been translated into U.S. dollars at the market average exchange rate, announced by Seoul Money Brokerage Services, Ltd. in Seoul, between Won and U.S. dollars, rounded to the nearest tenth of one Won (the "Market Average Exchange Rate"). For a discussion of historical information regarding the rate of exchange between the Won and the U.S. dollar, see "Exchange Rates." No representation is made that the Won or U.S. dollar amounts referred to in this Offering Circular could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all.

Any discrepancies in any table between totals and the sums of the amounts listed are due to rounding.

SERVICE OF PROCESS AND ENFORCEMENT OF CIVIL LIABILITIES

The Company is a statutory juridical entity established in Korea pursuant to the KORES Act. All of the Company's directors and officers and certain other persons named in this Offering Circular reside in Korea, and all or a significant portion of the assets of the directors and officers and certain other persons named in this Offering Circular and, substantial part of the Company's assets are located in Korea. 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 against the Company in U.S. courts judgments predicated upon the civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated on the U.S. federal securities laws.

FORWARD-LOOKING STATEMENTS

This Offering Circular contains certain "forward-looking statements" that are based on the Company's current expectations, assumptions, estimates and projections about the Company and the mining industry. The forward looking statements are subject to various risks and uncertainties. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "anticipate," "believe," "estimate," "expect," "intend," "target," "seek," "aim," "contemplate," "project," "plan," "goal," "should" and similar expressions or the negatives thereof. Those statements include, among other things, the discussions of the Company's business strategy and expectations concerning its market position, future operations, cash flows, margins, profitability, liquidity and capital resources. Reliance on any forward-looking statement involves risks and uncertainties, and although the Company believes that the assumptions on which the forward-looking statements are based are reasonable, any of those assumptions could prove to be inaccurate, and, as a result, the forward-looking statements based on those assumptions could be incorrect. The uncertainties in this regard include, but are not limited to, those identified in the risk factors discussed elsewhere in this Offering Circular. See the section entitled "Risk Factors" in this Offering Circular. In light of these and other uncertainties, you should not conclude that the Company will necessarily achieve any plans and objectives or projected financial results referred to in any of the forward-looking statements. The Company does not undertake to release the results of any revisions of these forward-looking statements to reflect future events or circumstances, except as required by law.

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In connection with the issue and distribution of any Tranche of Notes, the Dealer(s) (if any) named as the Stabilizing Manager(s) (or persons acting on behalf of any Stabilizing Manager(s)) in the applicable Pricing Supplement may, subject to all applicable laws and regulations, over-allot the Notes or effect transactions with a view to supporting the market price of the Notes of a Series (as defined below) of which such Tranche forms a part at a level higher than that which might otherwise prevail for a limited period after the issue date. However, there may be no obligation on the Stabilizing Manager(s) (or persons acting on behalf of any Stabilizing Manager(s)) to undertake any stabilizing action. Such stabilizing, if commenced, may be discontinued at any time, and must be brought to an end after a limited period.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents published or issued from time to time after the date hereof shall be deemed to be incorporated into, and to form part of, this Offering Circular:

(a) the most recently published audited consolidated annual financial statements and, if published later, the most recently published interim consolidated financial statements (if any) of the Company from time to time;

(b) the most recently published audited annual financial statements (if any) and, if published later, the most recently published interim financial statements (if any) of the Guaranteed Issuers from time to time; and

(c) all supplements or amendments to this Offering Circular circulated by the Issuers from time to time,

save that any statement contained herein or in a document which is deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purpose of this Offering Circular to the extent that a statement contained in any such subsequent document which is deemed to be incorporated by reference herein modifies or supersedes such earlier statement (whether expressly, by implication or otherwise). Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Offering Circular.

The Company and the Guaranteed Issuers will provide, without charge, to each person to whom a copy of this Offering Circular has been delivered, upon the request of such person, a copy of any or all of the documents deemed to be incorporated herein by reference unless such documents have been modified or superseded as specified above. Requests for such documents should be directed to the Company at its office set out at the end of this Offering Circular. In addition, such documents will be available from the principal office of The Bank of New York Mellon, London Branch (the "Principal Paying Agent") for any Notes listed on the Singapore Stock Exchange.

The Company and the Guaranteed Issuers will, in connection with the listing of the Notes on the Singapore Stock Exchange, so long as the rules of such exchange so require, in the event of any material change in the condition of the Company or the Guaranteed Issuers that is not reflected in this Offering Circular, prepare a supplement to this Offering Circular or publish a new Offering Circular for use in connection with any subsequent issue of the Notes to be listed on the Singapore Stock Exchange.

If the terms of the Program are modified or amended in a manner that would make this Offering Circular, as so modified or amended, inaccurate or misleading, a new offering circular will be prepared.

GENERAL DESCRIPTION OF THE PROGRAM

Under the Program, the Issuer, with the approval of the Guarantor (if applicable), may from time to time issue Notes denominated in any currency, subject to the terms and conditions as set out herein. A summary of the terms and conditions of the Program and the Notes appears below. The applicable terms of any Notes will be agreed among the Issuer, the Guarantor (if applicable) and the relevant Dealer prior to the issue of the Notes and will be set out in the terms and conditions of the Notes endorsed on, attached to, or incorporated by reference into, the Notes, as modified and supplemented by the applicable Pricing Supplement attached to, or endorsed on, such Notes, as more fully described under "Form of the Notes" below.

This Offering Circular and any supplement will only be valid for listing Notes on the Singapore Stock Exchange during the period of 12 months from the date of this Offering Circular in an aggregate nominal amount of the Notes which, when added to the aggregate nominal amount then outstanding of all Notes previously or simultaneously issued under the Program, does not exceed US$3,000,000,000 or its equivalent in other currencies. For the purpose of calculating the U.S. dollar equivalent of the aggregate nominal amount of Notes issued under the Program from time to time:

(a) the U.S. dollar equivalent of Notes denominated in another Specified Currency (as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under "Form of the Notes") shall be determined, at the discretion of the Issuer and the Guarantor (if applicable), either as of the date on which agreement is reached for the issue of Notes or on the preceding day on which commercial banks and foreign exchange markets are open for business in London, in each case on the basis of the spot rate for the sale of the U.S. dollar against the purchase of such Specified Currency in the London foreign exchange market quoted by any leading international bank selected by the Issuer and the Guarantor (if applicable) on the relevant day of calculation;

(b) the U.S. dollar equivalent of Dual Currency Notes, Index Linked Notes and Partly Paid Notes (each as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under "Form of the Notes") shall be calculated in the manner specified above by reference to the original nominal amount on issue of such Notes (in the case of Partly Paid Notes, regardless of the subscription price paid); and

(c) the U.S. dollar equivalent of Zero Coupon Notes (as specified in the applicable Pricing Supplement in relation to the relevant Notes, described under "Form of the Notes") and other Notes issued at a discount or a premium shall be calculated in the manner specified above by reference to the net proceeds received by the Issuer for the relevant issue.

SUMMARY OF THE PROGRAM

The following summary does not purport to be complete and is taken from, and is qualified in its entirety by, the remainder of this Offering Circular and, in relation to the terms and conditions of any particular Tranche of Notes, the applicable Pricing Supplement. Words and expressions defined in "Form of the Notes" and "Terms and Conditions of the Notes" below shall have the same meanings in this summary.

Initial Issuer	Korea Resources Corporation (the "Company")
Accession of New Issuers	Any subsidiary of the Company nominated by the Company may agree to be bound by all the terms of the Program, and thereby become a "New Issuer" by executing an accession agreement pursuant to the terms of the Agency Agreement. In this Offering Circular, any reference to the "Issuer" shall mean the Initial Issuer and the New Issuers in respect of the Notes issued by it in accordance with the terms of the Program.
Guaranteed Issuers	The New Issuers
Guarantor	Korea Resource Corporation, with respect to Notes issued by the Guaranteed Issuers.
Guarantee	The Guarantor will unconditionally and irrevocably guarantee (the "Guarantee") to each holder of Notes issued by a Guaranteed Issuer the due payment of all amounts owing from time to time under such Notes.
Description	Global Medium Term Note Program.
Arranger	Citigroup Global Markets Inc.
Dealers	BNP Paribas, Citigroup Global Markets Inc., Crédit Agricole Corporate and Investment Bank, The Hongkong and Shanghai Banking Corporation Limited, J.P. Morgan Securities plc, Merrill Lynch International, UBS AG Hong Kong Branch and any other Dealers appointed in accordance with the Program Agreement.
Certain Restrictions	Each issue of Notes denominated in a currency in respect of which particular laws, guidelines, regulations, restrictions or reporting requirements apply will only be issued in circumstances which comply with such laws, guidelines, regulations, restrictions or reporting requirements from time to time (see "Subscription and Sale and Transfer and Selling Restrictions") including the following restrictions applicable at the date of this Offering Circular. **Notes with a maturity of less than one year:** Notes having a maturity of less than one year from the date of issue will, if the proceeds of the issue are accepted in the United Kingdom, constitute deposits for the purposes of the prohibition on accepting

	deposits contained in section 19 of the Financial Services and Markets Act 2000 unless they are issued to a limited class of professional investors and have a denomination of at least £100,000 or its equivalent. See "Subscription and Sale and Transfer and Selling Restrictions."
Issuing and Principal Paying Agent	The Bank of New York Mellon, London Branch
Registrar, Transfer Agent, Paying Agent and Exchange Agent	The Bank of New York Mellon
Euro Registrar	The Bank of New York Mellon SA/NV, Luxembourg Branch
Program Size	Up to US$3,000,000,000 (or its equivalent in other currencies calculated as described under "General Description of the Program") outstanding at any time. The Company may increase the amount of the Program in accordance with the terms of the Program Agreement.
Distribution	Notes may be distributed by way of private or public placement and in each case on a syndicated or non-syndicated basis.
Currencies	Subject to any applicable legal or regulatory restrictions, any currency agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer.
Redenomination	The applicable Pricing Supplement may provide that certain Notes may be redenominated in euro. The relevant provisions applicable to any such redenomination are contained in Condition 5.
Maturities	Such maturities as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer, subject to such minimum or maximum maturities as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the Issuer or the Guarantor or the relevant Specified Currency.
Issue Price	Notes may be issued on a fully paid or a partly paid basis and at an issue price which is at par or at a discount to, or premium over, par.
Form of Notes	The Notes will be issued in registered form or in bearer form as described in "Form of the Notes." Registered Notes will not be exchangeable for Bearer Notes and vice versa.
Fixed Rate Notes	Fixed interest will be payable on such date or dates as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer and on redemption, and will be calculated on the basis of such Day Count Fraction (as defined in "Terms and Conditions of the Notes") as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer.
Floating Rate Notes	Floating Rate Notes will bear interest at a rate determined: (i) on the same basis as the floating rate under a notional interest rate swap transaction in the relevant Specified Currency governed by an

	agreement incorporating the 2006 ISDA Definitions (as published by the International Swaps and Derivatives Association, Inc., and as amended and updated as at the Issue Date of the first Tranche of Notes of the relevant Series); or (ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; or (iii) on such other basis as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer, all as indicated in the applicable Pricing Supplement. The margin (if any) relating to such floating rate will be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer for each Series (as defined under "Terms and Conditions of the Notes") of Floating Rate Notes.
Index Linked Notes	Payments of principal in respect of Index Linked Redemption Notes or of interest in respect of Index Linked Interest Notes will be calculated by reference to such index and/or formula or to changes in the prices of securities or commodities or to such other factors as the Issuer, the Guarantor (if applicable) and the relevant Dealer may agree, to the extent permitted by applicable law.
Other provisions in relation to Floating Rate Notes and Index Linked Interest Notes	Floating Rate Notes and Index Linked Interest Notes may also have a maximum interest rate, a minimum interest rate or both. Interest on Floating Rate Notes and Index Linked Interest Notes in respect of each Interest Period, as agreed prior to issue by the Issuer, the Guarantor (if applicable) and the relevant Dealer, will be payable on such Interest Payment Dates, and will be calculated on the basis of such Day Count Fraction, as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer.
Dual Currency Notes	Payments (whether in respect of principal or interest and whether at maturity or otherwise) in respect of Dual Currency Notes will be made in such currencies, and based on such rates of exchange, as the Issuer, the Guarantor (if applicable) and the relevant Dealer may agree.
Zero Coupon Notes	Zero Coupon Notes will be offered and sold at a discount to their nominal amount and will not bear interest other than in the case of late payment.
Change of Control	Upon the occurrence of a Change of Control, each holder of Notes will have the right to require the Issuer to redeem all or any part of such holder's Notes at a redemption price equal to 100% of the principal amount thereof plus accrued but unpaid interest, if any, to the date of redemption, as further described in Condition 8(d)(i).
Redemption	The applicable Pricing Supplement will indicate either that the relevant Notes cannot be redeemed prior to their stated maturity

	(other than in specified installments, if applicable, or for taxation reasons or following an occurrence of a Change of Control or an Event of Default (each as defined in "Terms and Conditions of the Notes"), or that such Notes will be redeemable at the option of the Issuer and/or the Noteholders (as defined in "Terms and Conditions of the Notes") upon giving notice to the Noteholders or the Issuer and the Guarantor, as the case may be, on a date or dates specified prior to such stated maturity and at a price or prices and on such other terms as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer. The applicable Pricing Supplement may provide that the Notes may be redeemable in two or more installments of such amounts and on such dates as are indicated in the applicable Pricing Supplement.
Denomination of Notes	The Notes will be issued in such denominations as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer save that the minimum denomination of each Note will be such as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the relevant Specified Currency. Unless otherwise stated in the applicable Pricing Supplement, the minimum denomination of each Definitive IAI Registered Note will be US$500,000 or its approximate equivalent in other Specified Currencies.
Taxation	All payments in respect of the Notes or the Guarantee (if applicable) will be made without deduction for or on account of withholding taxes imposed by a Tax Jurisdiction (as defined in "Terms and Conditions of the Notes"), subject as provided in Condition 9. In the event that any such deduction is made, the Issuer (and failing whom, the Guarantor) will, save in certain limited circumstances provided in Condition 9, be required to pay additional amounts to cover the amounts so deducted.
Certain Covenants	The terms of the Notes will contain a negative pledge provision and certain other covenants, as further described in Condition 4.
Cross Default	The terms of the Notes will contain a cross default provision as further described in Condition 11.
Status of the Notes	*Senior Notes*:
	Notes issued by the Company are referred to as Senior Notes. The Senior Notes will constitute direct, unconditional, unsubordinated and (subject to the provisions of Condition 4) unsecured general obligations of the Company and will rank *pari passu*, without any preference among themselves and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Company, from time to time outstanding.

	Senior Guaranteed Notes: Notes issued by a Guaranteed Issuer are referred to as Senior Guaranteed Notes. The Senior Guaranteed Notes will constitute direct, unconditional, unsubordinated and (subject to the provisions of Condition 4) unsecured general obligations of the Company and will rank *pari passu*, without any preference among themselves and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Guaranteed Issuer, from time to time outstanding. *Guarantee*: The Guarantee will constitute a direct, unconditional, unsubordinated and (subject to the provisions of Condition 4) unsecured general obligations of the Guarantor and will rank *pari passu*, without any preference among themselves and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Guarantor, from time to time outstanding.
Listing	Approval in-principle has been received from the Singapore Stock Exchange in connection with the Program and application will be made for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. For so long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, such Notes will be traded on the Singapore Stock Exchange in a minimum board lot size of S$200,000 (or its equivalent in other foreign currencies). The Notes may also be listed on such other or further stock exchange(s) as may be agreed between the Issuer, the Guarantor (if applicable) and the relevant Dealer in relation to each Series. Unlisted Notes may also be issued. The applicable Pricing Supplement will state whether or not the relevant Notes are to be listed or admitted to trading and, if so, on which stock exchange(s).
Governing Law	The Notes will be governed by, and construed in accordance with, New York law.
Selling Restrictions	There are restrictions on the offer, sale and transfer of the Notes in the United States of America, the European Economic Area (the "EEA"), the United Kingdom, Japan, Hong Kong, Singapore and Korea and such other restrictions as may be required in connection with the offering and sale of a particular Tranche of Notes. See "Subscription and Sale and Transfer and Selling Restrictions."

RISK FACTORS

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

Risks relating to the Company

The Company is subject to the control of the Government, and, as a public entity that implements the Government's mineral resources policy, its activities are heavily regulated.

The Company was established under the KORES Act to, among other policy objectives, secure a stable supply of key mineral resources strategically important to Korea's economic development. From time to time, the Company is required to take action in furtherance of public policy considerations and the Government's broader objectives for promoting domestic and overseas mineral resources development, which may not be necessarily in the Company's best commercial interests. As of the date of this Offering Circular, the Government holds 100% of the Company's issued share capital. Accordingly, the Government is able to elect the non-standing directors on the board of directors of the Company as well as the Company's president, who is authorized to appoint the standing directors of the Company. Although the Company's management runs the day-to-day operations, the Government may determine material policies relating to the direction of the Company's business and influence the Company's strategy. For example, public policy considerations relating to the level of the Company's exploration, development and production activities or stockpiling activities may affect the Company's business, results of operation and financial condition. The Government has historically influenced, and is likely to continue to influence, the Company's strategy and operations. See "The Company — Business — Relationship with the Government."

Most recently, in June 2016, the Ministry of Strategy and Finance and the Ministry of Trade, Industry and Energy announced broad-based measures (the "June 2016 Government Plan") to rationalize the overseas natural resource exploration, development and production activities of government-controlled enterprises, including the Company. The June 2016 Government Plans calls for, among other things, the Company's divesture from overseas exploration, development and production operations in phases, while strengthening the Company's support services to private Korean companies engaged in such operations, and the implementation of a hiring freeze and a reduction in the number of employees and overseas offices. The plan also calls for the further examination of consolidating the Company's strategic stockpiling and support services roles with other government-controlled enterprises. In addition, the Ministry of Trade, Industry and Energy announced that it will transfer the responsibility for administrative tasks related to the day-to-day operation of the Special Accounts for Energy and Resources ("SAER") funds and the administration of SAER loans for resources development-related projects from the Company to the Korea Energy Agency by the first half of 2017. See "The Company — Business — Relationship with the Government."

The Company is also heavily regulated by a variety of laws and government bodies, including the Ministry of Trade, Industry and Energy and the Ministry of Strategy and Finance. The Ministry of Trade, Industry and Energy, among other things, establishes policies relating to identifying, developing and stockpiling the key strategically important mineral resources. In addition, the Company must receive the Ministry of Trade, Industry and Energy's consent in most instances, and in some cases must seek amendments to current laws, to expand its operations into new businesses outside of its core operations. This may cause delays in enacting the Company's plans, which may adversely affect the Company's results of operations and financial condition. See "Regulation."

Decreases in commodity prices have adversely affected and may in the future adversely affect the Company's business, results of operations and financial condition.

The Company's financial performance is sensitive to changes in the market prices of the commodities that it and its affiliates produce, particularly the market prices of copper, nickel and coal. Historically, the prices of these commodities have been subject to fluctuations and have been affected by numerous factors beyond the Company's control, including global and regional supply and demand, supply and market prices of substitute or competing commodities, resource nationalism, international economic trends, exchange rate and interest rate fluctuations, expectations of inflation, speculative activities, political and other events in major mineral producing and consuming nations and production costs in major producing regions.

In recent years, the market prices of commodities, such as copper, nickel and coal, have decreased significantly, due primarily to the lower-than-expected economic growth of developing countries where there is greater demand for such commodities and the resulting oversupply. For example, the market price of nickel on the London Metal Exchange decreased from US$22,894 per ton in 2011 to US$9,609 per ton in 2016. Similarly, the market price of copper decreased from US$8,821 per ton in 2011 to US$5,502 per ton in 2016. The average price of bituminous coal delivered from Newcastle, Australia, and published by Platts decreased from US$121.1 per ton in 2011 to US$66.0 per ton in 2016, It is impossible to accurately predict future price movements of such commodities. Accordingly, commodity prices may not remain at, and may vary significantly from, their current levels. A significant or extended decline in the prices of these commodities could have a material adverse effect on the Company's business, results of operations and financial condition.

The Company reviews the book value of its tangible and intangible assets with definite useful lives, including its construction in progress assets and other mining properties, at the end of each reporting period to determine whether there is any indication of impairment. Goodwill and other intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually and whenever there is any indication of impairment. If any such indication exists, the Company estimates the recoverable amount of the relevant assets to determine the extent of the impairment loss, if any. The recoverable amount of an asset is the greater of its value in use, which is the estimated future net cash flow expected to be generated by the asset adjusted by a discount rate that reflects current market assessments of the time value of money and the risk specific to the asset, and its fair value less costs to sell. If the book value exceeds the recoverable amount of an asset, an impairment loss will be recognized and the book value of such asset will be adjusted to their recoverable amount.

The Company estimates the future net cash flows of its mining properties as well as intangible assets based on long-term forecasts from globally recognized research institutions. If such long-term forecasts estimate that commodities prices will decrease substantially, the Company may be required to recognize impairment losses on its mining properties and intangible assets. Likewise, certain of the Company's overseas direct investment projects, including Ambatovy and Capstone, which are accounted for as equity method investees in the Company's consolidated financial statements, may be required to recognize impairment losses on their mining properties and intangible assets, which may contribute to recognition of share of loss in associates and joint ventures by the Company.

The Company recognized loss on impairment of tangible assets of Won 561.2 billion in 2016 and Won 941.5 billion in 2015 compared to no such loss in 2014 due to impairment losses the Company recognized on Boleo's construction in progress assets. The Company recognized share of loss in associates and joint ventures of Won 261.1 billion in 2016 and Won 912.8 billion in 2015 compared to Won 139.6 billion in 2014, primarily due to loss on impairment associated with Ambatovy. Such recognition of impairment losses by the Company and its equity method investees were driven by significant declines in forecasted commodity prices and contributed to the Company's net losses for the year of Won 987.4 billion in 2016 and Won 2,063.6 billion in 2015 compared to Won 263.5 billion in 2014.

The Company cannot predict the amount or timing of any impairment of assets. If the Company is required to recognize an impairment loss on a significant portion of its assets, such impairment would have a material adverse effect on the Company's business, financial condition and results of operations. The continued net losses of the Company has led to the complete erosion of the Company's equity. See "— The Company has experienced complete erosion of its equity."

The Company has experienced complete erosion of its equity.

As of December 31, 2016, the liabilities of the Company exceeded the assets of the Company by Won 840.9 billion. The Company expects that its liabilities will continue to exceed its assets and it will continue to experience significant operating losses for the foreseeable future. If the Company continues to incur net losses in the future without significant capital contributions and other support from the Government permitted under the KORES Act, the Company's equity will remain eroded.

No bankruptcy or rehabilitation proceedings have been initiated against the Company under the Debtor Rehabilitation and Bankruptcy Act of Korea ("Bankruptcy Act"). The Company does not believe that the Bankruptcy Act applies to the Company as a statutory juridical wholly state-owned enterprise. Furthermore, the Act on Management of Public Agencies of Korea, which is the general act governing the operation of public agencies, such as the Company, does not have any provisions relating to the bankruptcy, liquidation or rehabilitation of a public agency. However, should it be found that the Bankruptcy Act does apply to the Company, or the Bankruptcy Act is amended or an analogous act is passed to include statutory juridical wholly state-owned enterprises, such as the Company, in the scope of such act, such development may have a material adverse effect on the Company's business, financial condition and results of operations.

The Company has no previous experience as a mine operator and such activity exposes the Company, to a number of risks and uncertainties.

Prior to increasing our equity stake to 74% and becoming the operator of the Boleo copper development project in Baja Peninsula, Mexico in 2014, the Company had no experience in the direct day-to-day operation of a mining development or production business. The Boleo project was previously operated by Carmrova Resources (previously named Baja Mining Corporation), a Canadian mining company, and had run into significant delays and cost overruns. The Company's aggregate investment amount in the Boleo project was Won 1,530.6 billion as of December 31, 2016, and the Company expects to make additional capital contributions of Won 88.2 billion in 2017, which include amounts already contributed by the Company year to date. The Company recognized loss on impairment of tangible assets of Won 561.2 billion in 2016 and Won 941.5 billion in 2015 compared to no such loss in 2014 due to impairment losses the Company recognized on Boleo's construction in progress assets.

Although the Company continues to make efforts to achieve normal operations, the Company cannot assure you that such strategy will be profitable, that the Company will be able to maintain sufficient operational and financial controls or that the Company can recoup the costs related to such investment. Upon assumption of its role as the project operator, the Company has been contending with various issues, including the issue of business continuity as the key management and operating personnel of the project from the previous operator have resigned. The Boleo project involves the operation of a complex processing plant that extracts zinc and cobalt as byproducts of its copper extraction, which requires substantial technical and operational know-how and exposes the Company to additional risks. In addition, Boleo faces environmental and safety concerns, including those arising from the utilization of the underground mining method in weak ground and the risk of contamination of soil, underground and surface water, as well as marine pollution due to Boleo's proximity to the ocean, by mineral extracting solutions and other chemicals from the mining processes.

Unforeseen conditions or developments could arise during the course of a directly operated project, which could delay or prevent completion of the project, substantially increase the cost of construction and affect the current and projected level of production, financing requirements or operating cost estimates. Any failure to manage such risks and uncertainties effectively could have a material adverse effect on the Company's business, results of operations and financial condition.

The Company faces various risks associated with its investments worldwide, and if the Company is not able to effectively manage these risks, the Company's financial condition and results of operations may be adversely affected.

The Company has significant overseas operations. As of December 31, 2016, the Company is participating in exploration, development and production projects in 32 locations in 17 countries, including Australia, Canada, Chile, China, Madagascar, Mexico and Panama. The Company is subject to political, legal and regulatory environments in these countries, some of which are known to be unstable, and differ in certain significant respects from those prevailing in developed countries. Furthermore, as the global competition for limited natural resources continues to intensify, the Company may face protectionist measures imposed by governments that are designed to protect local commercial interests.

The Company's operations abroad requires management attention and personnel resources. In addition, the Company's results of operations may be adversely affected by a number of risks in the countries in which it operates or has interests, including, but not limited to, the following:

- changes in international and domestic political and economic conditions as well as social conditions;
- challenges caused by distance, language, local business customs and cultural differences;
- local labor relation issues which could lead to significant work stoppages and labor unrest;
- changes in laws, regulations or governmental policies, or in the interpretation or enforcement thereof, including those affecting taxes and royalties on mineral resources, labor, environmental compliance and investments, as well as those driven by resource nationalism;
- difficulty and costs relating to compliance with the different commercial and legal requirements, including obtaining licenses, permits or other regulatory approvals from local authorities and in enforcing the Company's rights under contracts;
- fluctuations in foreign currency exchange rates;
- foreign exchange controls and cash repatriation restrictions;
- military hostilities or acts of terrorism; and
- natural disasters, including earthquakes, tsunamis and landslides, and epidemics or outbreaks such as avian flu, swine flu or severe acute respiratory syndrome.

The likelihood of the risks being realized and their potential impact on the Company vary from country to country and are difficult to predict with any degree of accuracy. The Company may not be able to develop and implement policies and strategies that will be effective in each location where it conducts business, and there can be no assurance that the Company's exposure to such risks will not adversely affect the Company's business, results of operations and financial condition.

If the Company is unable to divest from overseas exploration, development and production operations on acceptable terms, the Company's financial condition and results of operations may be adversely affected.

Pursuant to the June 2016 Government Plan, the Company is expected to divest certain of its overseas natural resources exploration, development and production activities in phases. Although the Company is exploring potential avenues to divest from such activities, such divestments may require the consent of third parties outside of the Company's control, such as consents of lenders under its borrowings or general partners in connection with the sale of certain of its assets. Any potential transaction would be dependent upon a number of factors that may be beyond the Company's control, including, among other factors, market conditions, industry trends, the interest of third-parties and the availability of financing to potential buyers on reasonable terms. There can be no assurance that the Company will be able to consummate any such transaction on acceptable terms or at all.

Even if the Company is successful in disposing of certain of its overseas assets through a sale or otherwise, the Company may be required to recognize a loss in connection with such disposal if the disposal price of such assets is less than their respective book value. In addition, the Company may not be able to reinvest the proceeds of any disposal on acceptable terms or at all.

The Company's failure to successfully divest from its overseas exploration, development and production operations or to reinvest the proceeds of any such disposal, each on acceptable terms, may have a material adverse effect on the Company's financial condition and results of operations.

The Company's business operations and results of operations may be adversely affected by present or future mining laws and regulations, including those relating to taxation.

The Company's operations are subject to numerous federal, state and local mining laws and regulations both in Korea and other jurisdictions in which it has operations. The Company believes that it is in compliance with such mining laws and regulations. However, such laws and regulations are subject to change and the Company cannot determine the extent to which its future operations and earnings may be affected by new legislation, new regulations or changes in existing regulations governing the mining industry. Changes in mining laws and regulations or in the interpretation or enforcement thereof or the enactment of new laws and regulations may cause the Company to incur additional costs in order to comply with such changes, which may materially and adversely affect the Company's business prospects, results of operations and financial condition.

Effective January 1, 2014, the Mexican government enacted a tax reform that introduced several new mining duties, including a special mining duty, on owners of mining concessions and assignments. The special mining duty is calculated by applying a 7.5% rate to any income derived from extracting activity (particularly the alienation or sale of extracted minerals) as recognized under the Mexican Income Tax Law (*Ley del Impuesto Sobre la Renta*), with the exception of interest income, annual inflationary gains and certain payments in cash, less certain deductions allowed under the Mexican Income Tax Law (*Ley del Impuesto Sobre la Renta*), with the exception of depreciation expense, interest expense and annual inflationary losses, and is payable annually by all holders of productive mining concessions and assignments. MMB, the local subsidiary entity of the Boleo project and a consolidated subsidiary of the Company, became subject to the special mining duty in 2015 as it met the relevant requirements for taxation by commencing initial production of copper in January 2015 and deriving income from the sale of extracted minerals beginning in the second half of 2015. However, as MMB is still ramping up for production, MMB did not record such income from the sale of copper as revenue in 2015. MMB is expected to recognize sales revenue beginning in 2018.

In December 2014, the shareholders of MMB by unanimous consent resolved to spin off MMB, with MMB surviving such spin-off as a separate entity, and establish two or more companies to which the assets, liabilities and capital stock of MMB, including its property, plant and equipment related to the extraction of minerals, will be transferred in blocks. Alternatively, MMB may decide to spin off MMB into a mining and processing company or segment MMB's financial results pursuant to an economic analysis. MMB is currently studying these and various other options to minimize its tax obligations and expects to implement one of the options by 2018. If MMB fails to successfully implement its plan to minimize its tax obligations, such failure could have a material adverse effect on the business, results of operation and financial condition of the Company.

The Company may encounter problems with joint overseas exploration, development and production projects, over which it may have limited control, and such problems may materially and adversely affect its business.

In recent years, the Company made a number of direct investments in overseas mineral resources exploration, development and production projects. The Company has until recently pursued these overseas exploration, development and production projects jointly with consortium partners or through acquisition of a minority interest in such projects. The Company typically lacks a controlling interest in these projects and does not act as operator. Therefore, the Company is usually dependent on its partners for their financial commitment and technical expertise and is unable to require that its joint ventures sell assets or return invested capital, make additional capital contributions or take any other action without the vote of at least a majority of its consortium partners. The Company has limited ability to control day-to-day activities on a project on which it is not the operator, and the partner on which the Company relies as operator may commit errors or misjudgments. If there are disagreements between the Company and its consortium partners or among the other consortium partners regarding the business and operations of the joint projects, the Company cannot assure you that it will be able to resolve them in a manner that will be in the Company's best interests. Certain major decisions, such as selling a stake in the joint project or refinancing these projects, may require the consent of all other partners. These limitations may adversely affect the Company's ability to obtain the economic and other benefits it seeks from participating in these projects.

In addition, the Company's consortium partners may:

- have economic or business interests or goals that are inconsistent with the Company's;
- take actions contrary to the Company's instructions, requests, policies or objectives;
- be unable or unwilling to fulfill their obligations;
- experience financial and other difficulties; or
- have disputes with the Company as to their rights, responsibilities and obligations.

Any of these and other factors may have a material adverse effect on the performance of the Company's joint projects and expose the Company to a number of risks, including the risk that the partners may be incapable of providing the required financial support to the partnerships and the risk that the partners may not be able to fulfill their other obligations, resulting in disputes not only between the Company and its partners, but also between the joint ventures and their customers. Such a material adverse effect on the performance of the Company's joint projects may in turn materially and adversely affect the Company's business, results of operations and financial condition.

Foreign exchange rate fluctuations may have a material adverse effect on the results of operations of the Company.

The Company's consolidated financial statements are prepared from the local currency denominated financial results, assets and liabilities of the Company and its subsidiaries around the world, which are then translated into Won. Accordingly, the Company's consolidated financial results and assets and liabilities may be materially affected by changes in the exchange rates of foreign currencies. Revenues generated from the Company's overseas operations are expected to increase as a percentage of its total revenues as the Boleo project is expected to commence commercial production in the second half of 2017. To the extent the Company incurs costs in one currency and generates revenues in another, its profit margins may be affected by changes in the exchange rates between the two currencies.

Appreciation of the Won may adversely affect the Company's results of operations because, among other things, it causes a reduction in the Company's net revenues and accounts receivables in terms of Won from its overseas investments, which are primarily denominated in U.S. dollars, as well as a reduction in the Won value of the Company's equity investments and monetary assets and liabilities denominated in foreign currencies. Because of the larger negative effects of an appreciation of the Won, depreciation of the Won generally has a net positive impact (that is the reverse of the negative impact of appreciation) on the Company's results of operations despite its effect of increasing the amount of Won required for the Company to make interest and principal payments on the Company's foreign currency-denominated debt (including, in the future, the Notes offered hereby), and increasing the foreign exchange translation losses on liabilities, which lower the Company's earnings for accounting purposes.

The Company strives to naturally offset foreign exchange risk by matching foreign currency financial assets, such as loans and receivables, with foreign currency financial liabilities, such as bonds and borrowings. The Company attempts to manage the remaining net exposure after natural hedges by entering into derivative transactions. Although the impact of exchange rate fluctuations has in the past been partially mitigated by such strategies, there can be no assurance that such strategies will be sufficient to reduce or eliminate the adverse impact of such fluctuations in the future. Foreign exchange rate fluctuations have had and may in the future have an adverse impact on the Company's results of operations and financial condition.

The ore reserve estimates in this Offering Circular are only estimates and may require substantial revisions as a result of future drilling, testing and production, and as such, the Company's actual production, revenues and expenditures may also differ materially from the estimates.

There is a degree of uncertainty attributable to the calculation of ore reserves. The proven and probable ore reserve data included in this Offering Circular are estimates made by the Company or other third-party consultants. The reliability of the estimates of the value and quantity of economically recoverable ore reserves, rates of production and the timing of capital contributions or expenditures depend upon several variables and assumptions, including, but not limited to, the following:

- quality and quantity of the technical and economic data used in the estimation process;
- extensive engineering judgments;
- interpretation of geological and geophysical data;
- continuity of current fiscal policy and regulatory regime in the countries where the reserves are located;
- assumptions concerning future commodity prices; and
- assumptions concerning future operating, development and production costs.

Many of the factors, assumptions and variables involved in estimating ore reserves are beyond the Company's control and may prove to be incorrect over time. The Company may be required in the future to revise its reserve estimates based on its subsequent drilling, testing and actual production. The Company cannot assure you that the Company's actual reserves conform to geological, metallurgical or other expectations or that the estimated volume and grade of ore will be recovered. Market prices of the mineral resources, increased production costs, reduced recovery rates, short-term operating factors, royalty charges and other factors may render proven and probable reserves uneconomic to exploit and may result in revisions of reserve estimates from time to time. Reserve estimates are not necessarily indicative of the Company's future prospects.

The Company operates in the highly competitive mineral resources industry, and its failure to compete successfully would adversely affect its business.

The mineral resources industry is highly competitive. Mines have limited lives, and as such, significant competition exists for the acquisition of properties producing or capable of producing mineral resources as industry participants continually seek to replace and expand their ore reserves through the acquisition of new properties. The Company is in competition with much larger, well-established companies with substantially greater financial, human, technical and other resources. Some of these competitors have been engaged in the mining business for much longer than the Company and have strong market power through a combination of different factors, such as diversification and reduction of risk, financial strength, exploitation of benefits of integration and economic scale, strengthening of their positions in the global market and their relations with the governments of mineral producing countries. Many of these competitors also have greater financial capacity to operate mines, fund acquisitions of ore reserves and conduct mineral resources exploration, development and production than the Company. As such, they may be able to identify, bid for and purchase a greater number of properties and prospects, including operatorships and licenses, or better compete on the basis of price or bear the economic risks inherent in the mining business than the Company's financial or human resources permit. Significant competitive pressure could make it difficult for the Company to invest in additional exploration, development and production projects, thereby causing a material adverse effect on the Company's business, results of operations and financial condition.

The Company's exploration, development and production activities require substantial expenditure and investments, and the Company's plans for, and its ability to make, such expenditures and investments are subject to various risks.

Exploring, developing and producing natural resources are capital-intensive activities with high risks. The Company made direct investments in its exploration, development and production projects in the amount of Won 351.4 billion, Won 308.7 billion and Won 605.2 billion in 2014, 2015 and 2016, respectively. As of December 31, 2016, the Company has directly invested Won 4,807.8 billion in its overseas exploration, development and production activities. The Company's current budget for direct investments in its exploration, development and production activities in 2017 is approximately Won 472.2 billion. The Company does not intend to invest in any material new projects in 2017.

The Company's ability to carry out its exploration, development and production activities and make the necessary capital expenditures and investments is subject to many risks, contingencies and other uncertainties, which may prevent the Company from achieving its desired results, or which may significantly increase the expenditures and investments that the Company makes, including, but not limited to, the following:

- the Company's ability to generate sufficient cash flows from operations to finance its expenditures, investments and other requirements, which are affected by changes in coal, copper, nickel and other commodity prices and other factors;
- the availability and terms of external financing;
- the Company's mix of exploration and development activities conducted on an independent basis and those conducted jointly with other partners;
- the extent to which the Company's ability to influence or adjust plans for exploration- and development-related expenditures is limited under joint venture agreements for those projects in which the Company has partners;
- government approvals required for exploration- and development-related expenditures and investments in jurisdictions in which the Company conducts its business; and
- economic, political and other conditions in jurisdictions in which the Company conducts its business.

The Company is subject to concentration risk in its direct investment operation, which increases the Company's exposure to market, political and other risks.

The largest investment by the Company to date is the Ambatovy project, which is a large tonnage nickel mining project in Madagascar. The Company is also heavily invested in the Boleo copper-cobalt-zinc mining project in Mexico as a 74% stakeholder and the operator of the project and the Cobre copper and molybdenum project as a 10% stakeholder. As of December 31, 2016, the Company's aggregate investment amount in Ambatovy, Boleo and Cobre was Won 1,773.8 billion, Won 1,530.6 billion and Won 496.6 billion, respectively, which together account for approximately 78.1% of the Company's aggregate cumulative investments in overseas projects as of December 31, 2016. In 2017, the Company expects to make additional capital contributions of approximately Won 297.7 billion, Won 88.2 billion and Won 83.5 billion in Ambatovy, Boleo and Cobre, respectively, which include amounts already contributed by the Company year to date.

Net income and losses recorded by the Ambatovy project are currently reflected in the Company's results of operations using the equity method of accounting. The Company recognized share of loss in associates and joint ventures of Won 139.6 billion in 2014, Won 912.8 billion in 2015 and Won 261.1 billion in 2016, principally relating to its investment in the Ambatovy project and the continued downturn in the market price of nickel. See "— Fluctuations in commodity prices have adversely affected and may in the future adversely affect the Company's business, results of operations and financial condition."

Boleo has been a consolidated subsidiary of the Company since July 2013. Although the Boleo project commenced initial production of copper in January 2015, commercial production at Boleo is not expected to commence until the second half of 2017. The Company recognized impairment losses on tangible assets of Won 941.5 billion in 2015 and Won 561.2 billion in 2016 compared to no such losses in 2014 due to impairment losses the Company recognized on Boleo's construction in progress assets and an overall downturn in the market price of copper. See "— Fluctuations in commodity prices have adversely affected and may in the future adversely affect the Company's business, results of operations and financial condition." The Company expects to continue to incur losses at Boleo until such time as the project commences commercial production and generates sufficient cash flows to support the payment of shareholder loan interest or any principal repayment, or other distribution of cash to the Company and offset depreciation expenses recognized by the Boleo project. There is no guarantee that commercial production will commence as planned, and the Company may not, in the foreseeable future or ever, generate any interest income or receive any dividends or repayment of loan principal from the Boleo project. Accordingly, the occurrence of any delays, cost overruns or unforeseen problems encountered by these projects may adversely affect the Company's results of operations and financial condition.

In addition, the Company's investments in mineral resources exploration, development and production projects are concentrated by geography and by product. As of December 31, 2016, of the 32 projects that the Company was invested in, ten were located in Australia and six were located in Latin America where economic and political instability lingers. For example, following a sharp decline in the central bank's foreign exchange reserves and the resulting depreciation of the peso, the Argentine government has introduced certain capital controls against foreign investors which could regulate remittance of dividend payments to overseas shareholders. In Africa, where the Company has equity interests in five projects, Madagascar experienced an unexpected change of government in 2009 and the resulting political instability has directly and indirectly impacted the Ambatovy project. A coup d'état in Niger in 2010 had an adverse effect on the Teguidda project resulting in a temporary suspension of payments by a bank that led to a delay in the ramp up of uranium production at Teguidda. The Company's investments are also concentrated by product, and approximately two-thirds of the total projects were investments in copper, nickel and coal. See "— Fluctuations in commodity prices may adversely affect the Company's results of operations and financial condition."

Such concentration of investment exposes the Company to increased risks of fluctuations in the exchange rates of certain foreign currencies and market prices of certain commodities, as well as political, economic and other conditions, which may adversely affect the Company's results of operations and financial condition.

A large portion of the Company's exposure in its lending operation is concentrated in a relatively small number of large borrowers and the concentration of exposure increases the Company's credit portfolio risk.

As of December 31, 2016, the Company's ten largest domestic loan exposures totaled Won 259.9 billion and accounted for 77.5% of the Company's total outstanding domestic loans, whereas the Company's ten largest overseas loan exposures totaled Won 170.8 billion and accounted for 65.2% of the Company's total outstanding overseas loans. As of that date, none of the Company's exposures to these borrowers was classified as substandard or below. As of that date, the Company's single largest domestic exposure was to LS-Nikko Copper Inc., to which the Company had outstanding exposures of Won 78.4 billion, representing 23.3% of the Company's total outstanding domestic loans.

A considerable increase in interest rates would raise the Company's funding costs while reducing loan demand and the repayment ability of the Company's borrowers, which, as a result, could adversely affect the Company.

Interest rates in Korea have been subject to significant fluctuations in recent years. In an effort to stem inflation amid improved growth prospects in the aftermath of the global financial crisis, the Bank of Korea gradually increased its policy rate in 2010 and 2011 by a total of 125 basis points to 3.25% from 2.00%. However, the Bank of Korea reduced its policy rate to 2.00% through a series of reductions from 2012 to 2014 to support Korea's economy in light of the slowdown in Korea's growth and uncertain global economic prospects. In March 2015, the Bank of Korea further reduced its policy rate to an unprecedented 1.75% amid deflationary concerns and interest rate cuts by central banks around the world.

A sustained increase in interest rates would raise the Company's funding costs, while reducing loan demand from borrowers. Rising interest rates may therefore require the Company to re-balance its assets and liabilities in order to minimize the risk of potential mismatches and maintain its profitability. In addition, rising interest rate levels may adversely affect the Korean economy and the financial condition and repayment ability of the Company's borrowers, which in turn may lead to a deterioration in the Company's credit portfolio.

The Company's risk management system may not be effective in mitigating risk and loss to the Company.

The Company seeks to monitor and manage its risk exposure through a comprehensive risk management platform, encompassing a centralized risk management organization and credit evaluation systems, reporting and monitoring systems, early warning systems and other risk management infrastructure, using a variety of risk management strategies and techniques. See "The Company — Management's Discussion and Analysis of Financial Condition and Results of Operations — Credit Risks." However, such risk management strategies and techniques employed by the Company and the judgments that accompany their application cannot anticipate the economic and financial outcome in all market environments, and many of the Company's risk management strategies and techniques have a basis in historic market behavior that may limit the effectiveness of such strategies and techniques in times of significant market stress or other unforeseen circumstances. Furthermore, the Company's risk management strategies may not be effective in a difficult or less liquid market environment, as other market participants may be attempting to use the same or similar strategies as the Company to deal with such market conditions. In such circumstances, it may be difficult for the Company to reduce its risk positions due to the activity of such other market participants.

Exploration, development, production and stockpiling activities involve numerous risks that may result in accidents and other operating risks and costs, for which the Company may not be fully insured.

The Company's exploration, development, production and stockpiling activities involve many risks, including unexpected geological formations or pressures, sudden blowouts, collapsed holes, natural disasters, environmental disasters, industrial accidents, power outages, labor disturbances, business interruptions, property damage, product liability, personal injury and death as well as stockpiling risks related to the condition of stockpiling facilities and their compliance with safety and environmental standards. The realization of any of these risks or the occurrence of any other accidents could result in diversion of resources, production disruption and reputational losses as well as potentially significant monetary losses, damages and liabilities. Insurance against certain of these risks with respect to the Company's overseas direct investment operations is typically maintained by the operator of the project, and the Company typically does not itself maintain any insurance against any of these risks. The occurrence of any of these events not fully covered by insurance may require the Company to cover the damages with its own funds, which in turn could materially and adversely affect the Company's business, results of operations and financial condition.

The Company's business operations may be adversely affected by present or future environmental or safety regulations.

The Company and its investee companies are subject to a wide variety of federal, state and local laws and regulations and permit requirements relating to the safety and protection of human health and the environment, both in Korea and in other jurisdictions in which it has operations. For a discussion of the environmental laws and regulations in Korea that are relevant for the Company, see "Regulation — Environmental Legislation." The Company incurs, and expects to incur, capital and operating costs in order to comply with such laws and regulations, which are becoming increasingly complex. The introduction of new laws and regulations, the imposition of tougher requirements in licenses, or increasingly strict enforcement or new interpretations of existing laws, regulations and licenses may require further expenditure to modify operations, install pollution control equipment, or curtail or cease certain operations. In addition, the discovery of previously unknown contaminations may require site clean-ups and the payment of fees, fines or other payments for pollution, discharges or other breaches of environmental requirements.

Where the Company does not act as the operator, it relies on its partners that are operators to comply with the applicable environmental regulations. As a result, the Company may incur additional expenses or liabilities if its partners fail to comply. The Company believes that the facilities and operations in which it holds interests are in material compliance with the requirements of the relevant environmental protection laws and safety regulations. While the costs of the measures taken to comply with such laws or regulations have not had a material adverse effect on the Company's financial condition or results of operations to date, the costs of such measures and liabilities related to damages caused by the Company's operations may increase in the future. Also, if the Company is unable to comply with the applicable laws and regulations, the local government may, at its discretion, close the non-complying facility, or force the Company to cease operations until proper compliance is made. Such increases in environmental or safety compliance costs or disruptions in operations may have a material adverse effect on the Company's results of operation and financial condition.

A downgrade in, or a negative outlook with respect to, the Company's credit ratings could adversely affect the Company's business, financial condition and results of operations.

Credit rating agencies could downgrade, or issue a negative outlook with respect to, the Company's credit ratings due to factors specific to the Company's business, a prolonged downturn in the mining industry or global commodities markets or credit market disruption.

On March 17, 2017, Moody's Investors Services downgraded the Company's issuer and senior unsecured ratings, as well as the Company's rating on its senior unsecured medium-term note program, from Aa3 to A1. Moody's similarly downgraded the senior unsecured bond ratings of MMB, guaranteed by the Company, from Aa3 and A1. The downgrade was due in part to the rating agency's assessment that the Company's policy role and strategic importance to the Korean government had weakened amidst the announcement of the June 2016 Government Plan and significant declines in commodity prices and impairment of assets of the Company, decreasing asset base as well as reductions in mining investments. The Company's credit ratings could be lowered, among others, if the prices of commodities continue at their currently depressed levels or further decline.

Reduced credit ratings could increase the Company's financing costs and adversely affect the Company's ability to raise additional capital in the capital markets in the future for working capital, capital expenditures, acquisitions and other general corporate purposes. If a credit rating downgrade were to occur at a time when the Company is experiencing significant working capital requirements or otherwise lack liquidity, the Company's business, results of operations and financial condition could be materially adversely affected.

The Company's business may be materially and adversely affected by legal claims and regulatory actions against us.

The Company is subject to the risk of legal claims and regulatory actions in the ordinary course of its business, which may expose the Company to substantial monetary damages and legal costs, injunctive relief, criminal and civil penalties, sanctions against the Company's management and employees and regulatory restrictions on the Company's operations, as well as significant reputational harm.

In February 2014, Hana UBS Ambatovy Nickel Overseas Resources Development Co., Ltd. I and II filed a lawsuit in the Seoul Central District Court against the Company relating to the sharing of profits from the nickel funds that the plaintiffs and the Company had formed to invest in the Ambatovy nickel mining project in Madagascar. The plaintiffs sought Won 30.9 billion in damages, claiming that they are entitled to a longer benefit period of profit sharing with respect to the funds. In December 2014, the Seoul Central District Court ruled against the Company. In January 2015, the Company appealed the decision to the Seoul High Court, and the Seoul High Court ruled against the Company in October 2016.

In December 2014, a committee of the Korean national assembly commenced investigations into allegations of corruption surrounding various overseas resources projects conducted during the previous administration under former President Lee. As part of such investigations, in February and March 2015, the national assembly committee conducted an inspection of the Company and its investments in the Ambatovy and Boleo projects. The investigations were completed in May 2015.

From March to June 2015, the Board of Audit and Inspection of Korea conducted an inspection of the Company, Korea National Oil Corporation and Korea Gas Corporation. According to press reports, the focus of the inspection was on assessing the performance of state-financed overseas resource development projects as well as the administration of SAER loans by the energy and resources related state- owned enterprises. Such SAER loans may be exempted from repayment if exploration projects do not result in discoveries. No further actions were taken by the Board of Audit and Inspection of Korea with respect to the Company following the completion of the inspection.

In addition, in September 2015, the Seoul Central District Prosecutor's Office brought charges against Shin Jong Kim, the Company's former president and chief executive officer, in connection with the losses faced by the Company after the Company had purchased Keangnam Enterprises, Ltd.'s shares in the Ambatovy project when Keangnam could not fulfill its equity investment commitments to the project. In February 2017, the Seoul Central District Court acquitted Mr. Kim of all charges. It is unclear whether the Prosecutor's Office will appeal the decision.

In July 2016, POSCO DAEWOO Corp. gave notice to the Company of its intention to withdraw from the consortium of Korean companies in the Ambatovy project and initiated arbitration proceedings against the Company and STX Corp., the other member of the consortium. POSCO DAEWOO Corp. alleged that the Company had mismanaged the operation of the consortium and is seeking damages and the sale of its interest in the consortium to the other consortium members. While POSCO DAEWOO Corp. has initially claimed a nominal amount of Won 400 million from the Company, if POSCO DAEWOO Corp. prevails, the actual amount of damages may increase depending on the eventual valuation of POSCO DAEWOO Corp.'s interest in the consortium and the damages it suffered. The Company cannot presently predict the outcome of the arbitration proceedings.

The Company is unable to predict the final outcome of these and other investigations, lawsuits, arbitration proceedings and regulatory actions, and the scope of the investigations in these matters may increase and lower court decisions may be appealed. Additional investigations may be launched by governmental authorities or civil claims may be filed against the Company in the future with respect to these or other alleged legal violations by the Company and its current and former officers and employees. An adverse determination in any such proceedings may result in significant regulatory sanctions and financial liability as well as reputation harm to the Company, which in turn may have a material adverse effect on the Company's business, results of operations and financial condition.

The Company may be exposed to potential claims made by current or previous employees for unpaid wages and may also incur increased labor costs as a result of the expansion of the scope of ordinary wages.

Under the Labor Standards Act and Labor Severance Payment Security Act of Korea, the amount of compensation to which an employee is legally entitled, such as overtime allowance for night shifts or work performed outside of working hours as well as severance pay, is determined by the definition of "ordinary wage."

Prior to the Supreme Court's decision as described below, the Ministry of Labor had released guidelines which recognized base salary and certain fixed monthly allowances as the components of ordinary wage. Pursuant to such guidelines, many companies excluded fixed bonuses paid bimonthly, quarterly or semi-annually from the definition of ordinary wage in calculating overtime allowances, although certain lower courts had held that fixed bonuses, whether paid monthly or not, should be included in the definition of ordinary wage if such bonuses are paid regularly to all employees.

On December 18, 2013, the Supreme Court of Korea delivered a decision which provided a standard rule for determining what kinds of payments should be included as part of ordinary wage. According to this decision, fixed bonuses paid regularly are included in ordinary wage, and any collective bargaining agreement or labor-management agreement which provides for exclusion of such regular bonuses from the scope of ordinary wage is void as such provision is in violation of the mandatory provisions of Korean law. However, with respect to wage agreements executed on or prior to December 18, 2013, the Supreme Court of Korea further ruled that an employee's claim for extra payments will not be granted on principles of good faith if such claim imposes an unexpected financial burden on the employer and results in material managerial difficulty or poses a threat to the existence of the employer, to the extent that such claim is made on the basis of rescission of any existing wage agreement that sets the total amount of wage but excludes regular bonus payments from the scope of ordinary wage.

In connection with the Supreme Court's decision described above, in May 2014, over 300 employees belonging to the Company's labor union filed a lawsuit in the Seoul Central District Court for unpaid wages amounting to approximately Won 6 billion. In July 2017, the Seoul Central District Court ruled for the employees on certain of their claims and awarded damages in the amount of Won 83 million plus interest. The Company has chosen not to appeal the ruling. The Supreme Court's decision may subject the Company to additional claims by current and previous employees for unpaid wages, and the Company may incur an increase in labor costs due to the broader definition of ordinary wage under Korean law.

The Company's ability to maintain and grow its business will depend on the continuing efforts of its key personnel.

The Company's efforts to grow its business will place significant demands on its management and other resources as the Company will be required to continue to improve operational, financial and other internal controls, both in Korea and overseas locations where the Company conducts its business. Accordingly, the future success of the Company depends to a significant extent on the continued service from its senior management, engineers and technical personnel as well as other key team members in its business units, particularly those with expertise in the mining industry, and on the Company's ability to continue to attract, retain and motivate such key personnel. There is substantial competition for qualified personnel, and there can be no assurance that the Company will be able to attract or retain them. If one or more of the Company's key executive officers or other key personnel retire, or are unable or unwilling to continue in their present positions, it could be difficult to find and integrate replacement personnel in a timely manner, or at all. The loss of the service of any of the Company's key personnel without adequate replacement, or the inability to attract new qualified personnel, may hinder the Company's ability to maintain and grow its business, which in turn could have a material adverse effect on the Company's business, results of operations and financial condition.

Risks relating to Korea

The Company is significantly supported by the Government, and its current business and future growth could be materially and adversely affected if economic conditions in Korea deteriorate.

The Company is wholly owned by the Government and serves as an execution arm for Government policies and businesses relating to mineral resources, supported by significant capital contributions and other support from the Government. The Company's headquarters and significant parts of its off-take customers and assets are also located in Korea. Accordingly, the Company's performance and successful fulfillment of its operational strategies are necessarily dependent on the overall Korean economy and the resulting impact on the need for mineral resources. The economic indicators in Korea in recent years have shown mixed signs of growth and uncertainty, and future growth of the Korean economy is subject to many factors beyond the Company's control, including developments in the global economy.

Due to recent liquidity and credit concerns and volatility in the global financial markets, the value of the Won relative to the U.S. dollar and other foreign currencies and the stock prices of Korean companies have fluctuated significantly in recent years. In particular, there has been increased volatility in light of concerns regarding, among other things, the financial difficulties affecting many governments worldwide, in particular in southern Europe and Latin America, as well as the recent slowdown of economic growth in China and other major emerging market economies, in addition to 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. Accordingly, the overall prospects for the Korean and global economies in 2015 and beyond remain uncertain. Any future deterioration of the Korean or global economy could adversely affect the business, financial condition and results of operations of the Company.

Developments that could have an adverse impact on Korea's economy in the future include:

- difficulties in the financial sectors in Europe and elsewhere and increased sovereign default risks in selected 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 in the wake of a referendum in the United Kingdom in June 2016, in which the majority of voters voted in favor of an exit from the European Union ("Brexit");

- 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 and the overall impact of Brexit on the value of the Korean Won), 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;
- further 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 recent political scandal in Korea involving a confidant of the President and the resulting social unrest, as well as related investigations of Korean conglomerates and their senior management for bribery, embezzlement and other possible misconduct;
- increased sovereign default risk in select countries and the resulting adverse effects on the global financial markets;
- 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;
- 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 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);
- 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.

Political and societal unrest surrounding the impeachment of President Park Geun-hye could adversely affect the Korean economy and the Company.

In November 2016, the Korean prosecutor's office indicted a confidant of President Park Geun-hye who had allegedly used her ties with the President to extort donations from Korean business groups for two non-profit foundations over which she is purported to have substantial influence, as well as a number of current and former presidential aides, on charges of, among others, abuse of power, coercion and leaking classified documents. On November 30, 2016, a special independent prosecutor was appointed to conduct an investigation of the extent of the President's involvement, and mass weekend rallies have been held in Seoul and other cities both to protest against, and to express support for, President Park.

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. A special election to elect a new President is scheduled to be held on May 9, 2017. 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 March 31, 2017, the Seoul Central District Court issued an arrest warrant for former President Park in connection with such investigation. There is no assurance that such events will not have a material adverse effect on the Korean economy and on the Company's business, financial condition and results of operations.

Escalations in tensions with North Korea could have an adverse effect on the Company and the market value of the Notes.

Relations between Korea and North Korea have been tense throughout Korea's modern history. 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. Although Kim Jong-il's third son, Kim Jong-eun, has assumed power as his father's designated successor, the long-term outcome of such leadership transition remains uncertain.

In addition, there have been heightened security concerns in recent years stemming from North Korea's nuclear weapon and long-range missile programs as well as its hostile military 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 additional ballistic missile tests in June 2016, a submarine-launched ballistic missile test in August 2016 and intermediate-range ballistic missile tests in February and March 2017. In February 2017, the United Nations Security Council issued a unanimous statement condemning North Korea and agreeing to continue to closely monitor the situation and to take further significant measures.

- 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, which increased tensions in the region and elicited strong objections worldwide. In January 2016, North Korea conducted a fourth nuclear test, claiming that the test involved its first hydrogen bomb, which claim has not been independently verified. In response to such test (as well as North Korea's long-range rocket launch in February 2016), the United Nations Security Council unanimously passed a resolution in March 2016 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 September 2016, North Korea conducted a fifth nuclear test, claiming to have successfully detonated a nuclear warhead that could be mounted on missiles, which claim has not been independently verified.

- 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. High-ranking officials from North Korea and Korea subsequently met for discussions and entered into an agreement on August 25, 2015 intending to defuse military tensions.

- 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 aggravate social and political pressures within North Korea.

There can be no assurance that the level of tensions affecting the Korean peninsula will not escalate in the future. Any further increase in tensions, which may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between Korea and North Korea break down or military hostilities occur, could have a material adverse effect on the Company's business, results of operations and financial condition and the price of the Notes, including a downgrade in the credit rating of Korea, the Company or the Notes.

There are special risks involved with investing in securities of Korean companies, including the possibility of restrictions being imposed by the government in emergency circumstances as well as accounting and corporate disclosure standards that differ from those in other jurisdictions.

As the Company is a Korean company and operates in a business and cultural environment that is different from that of other countries, there are risks associated with investing in its securities that may not be typical for investments in securities of companies in other jurisdictions.

Under the Foreign Exchange Transaction Act of Korea and the Presidential Decree and regulations under that Act and Decree (collectively referred to as the "Foreign Exchange Transaction Laws"), if the Government deems that certain emergency circumstances, including sudden fluctuations in interest rates or exchange rates, extreme difficulty in stabilizing the balance of payments or substantial disturbance in the Korean financial and capital markets, are likely to occur, it may impose any necessary restriction such as requiring Korean or foreign investors to obtain prior approval from the Minister of Strategy and Finance for the acquisition of Korean securities or for the repatriation of interest, dividends or sales proceeds arising from Korean securities or from disposition of such securities or other transactions involving foreign exchange. Moreover, if the Government deems it necessary on account of war, armed conflict, natural disaster or grave and sudden and significant changes in domestic or foreign economic circumstances or similar events or circumstances, the Minister of Strategy and Finance may temporarily suspend performance under any or all foreign exchange transactions, in whole or in part, to which the Foreign Exchange Transaction Laws apply (including suspension of payment and receipt of foreign exchange) or impose an obligation to deposit, safe-keep or sell any means of payment to the Bank of Korea or certain other governmental agencies or financial institutions.

In addition, the financial statements of the Company included in this Offering Circular have been prepared in accordance with Government Accounting Standards or K-IFRS, as the case may be, and the Company expects to prepare its financial statements in accordance with Government Accounting Standards for future periods, which differ in certain respects from accounting principles applicable to companies in certain other countries, including the United States. In addition, the Company is not a listed company and makes public disclosures regarding aspects of its business pursuant to the Act on the Management of Public Agencies and other laws applicable to the Company. These disclosure rules differ in many material respects from those applicable to companies in certain other countries, including the United States. There may also be less publicly available information about Korean companies, such as the Company, than is regularly made available by public or nonpublic companies in other countries. In making an investment decision, investors must rely upon their own examination of the Company, the terms of the offering and the financial information contained in this Offering Circular.

Risks relating to the Notes and the Guarantee

The Notes and the Guarantee are not guaranteed by the Republic of Korea.

The Notes and the Guarantee are not the obligations of, or guaranteed by, the Republic of Korea. Although under the KORES Act, the Government is allowed to guarantee bonds offered by the Company, it is not providing a guarantee in respect of the Notes or the Guarantee. In addition, the Government is under no obligation to maintain the solvency of the Issuer. Therefore, investors should not rely on the Government to fulfill the Issuer's obligations under the Notes or the Guarantor's obligations under the Guarantee in the event the Issuer or the Guarantor, respectively, is unable to do so.

The Notes and the Guarantee are unsecured obligations and the ability of the holder of the Notes to receive payments under the Notes and the Guarantee may be compromised under certain circumstances.

Because the Notes and the Guarantee are unsecured, the Notes and the Guarantee will be effectively subordinated to any existing and future secured debt incurred by the Issuer, the Guarantor and their respective subsidiaries to the extent of the value of the assets securing any such secured debt. If the Issuer, the Guarantor or their subsidiaries were unable to repay any of their respective secured indebtedness, the holders of such debt could proceed against the assets securing that debt and those assets would not be available to the holders of the Notes and the Guarantee.

Furthermore, the Notes and the Guarantee will be structurally subordinated to all indebtedness and other obligations of the subsidiaries of the Issuer and the Guarantor, respectively. In the event of a bankruptcy, liquidation, rehabilitation or other winding-up proceedings of a subsidiary of the Issuer or the Guarantor, all of the creditors of that subsidiary, including trade creditors, will generally be entitled to be paid in full from the assets of such subsidiary before any of those assets are made available for distribution to the Issuer or to the Guarantor, as the case may be. The ability of the holders of the Notes to receive payment under the Notes and the Guarantee may also be compromised if:

- the Guarantor enters into bankruptcy, liquidation, rehabilitation or other winding-up proceedings;
- there is a default in payment under the Guarantor's future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of the Guarantor's indebtedness.

If any of these events occurs, the Guarantor's assets may not be sufficient to fulfill its obligations under the Guarantee to pay amounts due on any of the Notes.

The Notes are subject to transfer restrictions.

The Notes will not be registered under the Securities Act or any state securities laws of the United States and may not be offered or sold to any person in the United States, or to, or for the account or benefit of, U.S. persons except pursuant to an exemption from, or, in a transaction not subject to, the registration requirements of the Securities Act. For a further discussion of the transfer restrictions applicable to the Notes, see "Subscription and Sale and Transfer and Selling Restrictions — Transfer Restrictions."

The Notes may have limited liquidity.

There can be no assurance as to the liquidity of, or the development and continuation of an active trading market for, the Notes. If an active trading market for the Notes does not develop or is not maintained, the market price and liquidity of the Notes may be adversely affected. If an active trading market for the Notes were to develop, the Notes could trade at prices that may be higher or lower than the offering price depending on many factors, including:

- prevailing interest rates;
- the Company's results of operations, financial condition and future prospects;
- political and economic developments in and affecting Korea;
- the market conditions for similar securities;
- the financial condition and stability of the mining industry; and
- the Korean and Singaporean financial markets.

There are tax consequences of holding Bearer Notes.

Any potential investor should consult its own independent tax adviser for more information about the tax consequences of acquiring, owning and disposing of Bearer Notes in its particular circumstances. Bearer Notes generally may not be offered or sold in the United States or to United States persons. Unless an exemption applies, a United States person holding a Bearer Note or coupon will not be entitled to deduct any loss on the Bearer Note or coupon and must treat as ordinary income any gain realized on the sale or other disposition of the Bearer Note or coupon.

Risks relating to forward-looking statements

This Offering Circular contains forward-looking statements that are the management's present expectations of future events and are subject to uncertainties that could cause actual results to differ materially from those described in the forward-looking statements.

In addition to the risks related to the Company's business discussed above, other factors could cause actual results to differ materially from those described in the various forward-looking statements contained in this Offering Circular. These factors include, but are not limited to, the following:

- general economic, business, political and social conditions;
- fluctuations in commodity prices;

- adverse trends in regulatory, legislative and judicial developments, including litigation and environmental regulatory restrictions and liabilities;
- changes in interest rates;
- evaluation of exploration prospects and the speculative nature of mineral exploration and development, including the risks of obtaining necessary licenses and permits;
- estimates of proved or probable mineral reserves;
- expansion and other development trends of the mining industry and regulatory, administrative or economic conditions affecting the mining industry, including changes to applicable mining and other laws governing the mining industry;
- the risks and hazards associated with the mining business and operating or technical difficulties in connection with mining or development activities;
- contests over title to properties, particularly title to undeveloped properties;
- supply of mining and related equipment and availability and costs associated with mining inputs and labor;
- business strategy, including expansion and growth of operations;
- the ability of third parties to perform in accordance with contractual terms and specifications;
- fluctuations in exchange rates between the Won and the U.S. dollar;
- the Company's leverage and its ability to meet its debt obligations;
- future earnings and cash flow;
- the Company's estimated financial information; and
- conditions in the Korean and the global financial markets.

By their nature, certain disclosures relating to these and other risks are only estimates and should one or more of these uncertainties or risks materialize, actual results may vary materially from those estimated, anticipated or projected, as well as from historical results. Specifically but without limitation, revenues could decrease, costs (including capital costs) could increase, investments could be delayed and anticipated improvements in performance might not be fully realized.

The Issuer and the Guarantor (if applicable) caution you not to rely on the forward-looking statements, which speak only as of the date of this Offering Circular. Except as required by law, neither the Issuer nor the Guarantor is under any obligation, and expressly disclaims any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to the Issuer or the Guarantor or any person acting on their behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

FORM OF THE NOTES

The Notes of each Series will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued outside the United States to non-U.S. persons in reliance on Regulation S under the Securities Act ("Regulation S") and Registered Notes will be issued both outside the United States in reliance on the exemption from registration provided by Regulation S and within the United States in reliance on Rule 144A or Regulation D under the Securities Act.

Bearer Notes

Each Tranche of Bearer Notes will be in bearer form and will be initially issued in the form of either a temporary bearer global note (a "Temporary Bearer Global Note") or a permanent bearer global note (a "Permanent Bearer Global Note") as indicated in the applicable Pricing Supplement, which, in either case, will be delivered on or prior to the original issue date of the Tranche to a common depositary (the "Common Depositary") for Euroclear Bank S.A./N.V. ("Euroclear") and Clearstream Banking, S.A. ("Clearstream, Luxembourg"). Whilst any Bearer Note is represented by a Temporary Bearer Global Note, payments of principal, interest (if any) and any other amount payable in respect of the Notes due prior to the Exchange Date (as defined below) will be made against presentation of the Temporary Bearer Global Note only to the extent that certification (in a form to be provided) to the effect that the beneficial owners of interests in such Bearer Note are not U.S. persons or persons who have purchased for resale to any U.S. person, as required by U.S. Treasury regulations, has been received by Euroclear and/or Clearstream, Luxembourg and Euroclear and/or Clearstream, Luxembourg, as applicable, has given a like certification (based on the certifications it has received) to the Principal Paying Agent ("non-U.S. beneficial ownership certification").

On and after the date (the "Exchange Date") which is 40 days after the Temporary Bearer Global Note is issued, interests in such Temporary Bearer Global Note will be exchangeable (free of charge) upon a request as described therein either for (i) interests in a Permanent Bearer Global Note of the same Series or (ii) for definitive Bearer Notes of the same Series with, where applicable, receipts, interest coupons and talons attached (as indicated in the applicable Pricing Supplement and subject, in the case of definitive Bearer Notes, to such notice period as is specified in the applicable Pricing Supplement), in each case against non-U.S. beneficial ownership certification as described above unless such certification has already been given. The holder of a Temporary Bearer Global Note will not be entitled to collect any payment of interest, principal or other amount due on or after the Exchange Date unless, upon due certification, exchange of the Temporary Bearer Global Note for an interest in a Permanent Bearer Global Note or for definitive Bearer Notes is improperly withheld or refused.

Payments of principal, interest (if any) or any other amounts on a Permanent Bearer Global Note will be made through Euroclear and/or Clearstream, Luxembourg against presentation or surrender (as the case may be) of the Permanent Bearer Global Note without any further requirement for certification beyond the initial non-U.S. beneficial ownership certification as described above.

The applicable Pricing Supplement will specify that a Permanent Bearer Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Bearer Notes with, where applicable, receipts, interest coupons and talons attached upon either (i) not less than 60 days' written notice from Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the Principal Paying Agent as described therein or (ii) only upon the occurrence of an Exchange Event. In the case of definitive Bearer notes that are issued in exchange for any Permanent Bearer Global Notes, such exchange shall only be permitted if the issuance of definitive Bearer Notes are issued in integral multiples of the Specified Denomination. For these purposes, an "Exchange Event" means that (i) an Event of Default (as defined in Condition 11) has occurred and is continuing, (ii) the Issuer and the Guarantor (if applicable) have been notified that both Euroclear and Clearstream, Luxembourg have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no alternative clearing system is available or (iii) the Issuer or the Guarantor (if applicable) has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Permanent Bearer Global Note in definitive form (provided that, in certain circumstances where the Notes are held through Euroclear and Clearstream, Luxembourg, such adverse tax consequences are the result of a change in, or amendment to, the laws and regulations (taxation or otherwise) of a Tax Jurisdiction). For so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in the event that a Permanent Bearer Global Note is exchanged for definitive Bearer Notes, the Issuer and the Guarantor (if applicable) will appoint and maintain a Singapore Paying Agent (as defined below), where the definitive Bearer Notes may be presented or surrendered for payment or redemption. In addition, in the event that a Permanent Bearer Global Note is exchanged for definitive Bearer Notes, announcement of such exchange shall be made by the Issuer and the Guarantor (if applicable) or on the their behalf through the Singapore Stock Exchange and such announcement will include all material information with respect to the delivery of the definitive Bearer Notes, including details of the Singapore Paying Agent. In the event of the occurrence of an Exchange Event, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) may give notice to the Principal Paying Agent requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer and the Guarantor (if applicable) may also give notice to the Principal Paying Agent requesting exchange. Any such exchange shall occur not later than 45 days after the date of receipt of the first relevant notice by the Principal Paying Agent.

The following legend will appear on all Bearer Notes that have an original maturity of more than 365 days and on all receipts and interest coupons relating to such Notes:

"ANY UNITED STATES PERSON WHO HOLDS THIS OBLIGATION WILL BE SUBJECT TO LIMITATIONS UNDER THE UNITED STATES INCOME TAX LAWS, INCLUDING THE LIMITATIONS PROVIDED IN SECTIONS 165(j) AND 1287(a) OF THE INTERNAL REVENUE CODE."

The sections referred to provide that United States holders, with certain exceptions, will not be entitled to deduct any loss on Bearer Notes and will not be entitled to capital gains treatment of any gain on any sale, disposition, redemption or payment of principal in respect of such Notes.

Notes that are represented by a Bearer Global Note will only be transferable in accordance with the rules and procedures for the time being of Euroclear or Clearstream, Luxembourg, as the case may be.

Registered Notes

The Registered Notes of each Tranche offered and sold in reliance on Regulation S, which will be sold to non-U.S. persons outside the United States, will initially be represented by a global note in registered form (a "Regulation S Global Note"). Prior to expiry of the distribution compliance period (as defined in Regulation S) applicable to each Tranche of Notes, beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person save as otherwise provided in Condition 2 and may not be held otherwise than through Euroclear or Clearstream, Luxembourg and such Regulation S Global Note will bear a legend regarding such restrictions on transfer.

The Registered Notes of each Tranche may only be offered and sold in the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("QIBs") or (ii) to "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("Institutional Accredited Investors") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. The Registered Notes of each Tranche sold to QIBs will be represented by a global note in registered form (a "Rule 144A Global Note" and, together with a Regulation S Global Note, the "Registered Global Notes").

The Registered Global Notes will either (a) be deposited with a custodian for, and registered in the name of a nominee of, the Depository Trust Company ("DTC") for the accounts of Euroclear and Clearstream, Luxembourg or (b) be deposited with a common depositary for, and registered in the name of a common nominee of, Euroclear and Clearstream, Luxembourg, as specified in the applicable Pricing Supplement. Persons holding beneficial interests in the Registered Global Notes will be entitled or required, as the case may be, under the circumstances described below, to receive physical delivery of definitive Notes in fully registered form. The Registered Notes of each Tranche sold to Institutional Accredited Investors will be in definitive form, registered in the name of the holder thereof ("Definitive IAI Registered Notes"). Unless otherwise set forth in the applicable Pricing Supplement, Definitive IAI Registered Notes will be issued only in minimum denominations of US$500,000 and integral multiples of US$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency). Definitive IAI Registered Notes will be subject to the restrictions on transfer set forth therein and will bear the restrictive legend described under "Subscription and Sale and Transfer and Selling Restrictions." Institutional Accredited Investors that hold Definitive IAI Registered Notes may elect to hold such Notes through DTC, but transferees acquiring the Notes in transactions exempt from Securities Act registration pursuant to Regulation S or Rule 144 under the Securities Act (if available) may do so upon satisfaction of the requirements applicable to such transfer as described under "Subscription and Sale and Transfer and Selling Restrictions." The Rule 144A Global Note and the Definitive IAI Registered Notes will be subject to certain restrictions on transfer set forth therein and will bear a legend regarding such restrictions.

Payments of principal, interest and any other amount in respect of the Registered Global Notes will, in the absence of provision to the contrary, be made to the person shown on the Register (as defined in Condition 7(d)) as the registered holder of the Registered Global Notes. None of the Issuer, the Guarantor, any Paying Agent or the Registrar will have any responsibility or liability for any aspect of the records relating to or payments or deliveries made on account of beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Payments of principal, interest or any other amount in respect of the Registered Notes in definitive form will, in the absence of provision to the contrary, be made to the persons shown on the Register on the relevant Record Date (as defined in Condition 7(d)) immediately preceding the due date for payment in the manner provided in that Condition.

Interests in a Registered Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Registered Notes without receipts, interest coupons or talons attached only upon the occurrence of an Exchange Event. For these purposes, an "Exchange Event" means that (a) an Event of Default has occurred and is continuing, (b) in the case of Notes registered in the name of a nominee for DTC, either DTC has notified the Issuer and the Guarantor (if applicable) that it is unwilling or unable to continue to act as depository for the Notes and no alternative clearing system is available or DTC has ceased to constitute a clearing agency registered under the Exchange Act, (c) in the case of Notes registered in the name of a nominee for a common depositary for Euroclear and Clearstream, Luxembourg, the Issuer and the Guarantor (if applicable) have been notified that both Euroclear and Clearstream, Luxembourg have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and, in any such case, no successor clearing system is available or (d) the Issuer or the Guarantor (as applicable) has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Registered Global Note in definitive form (provided that, in certain circumstances where the Notes are held through Euroclear and Clearstream, Luxembourg, such adverse tax consequences are the result of a change in, or amendment to, the laws and regulations (taxation or otherwise) of a Tax Jurisdiction).

For so long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in the event that a Permanent Registered Global Note is exchanged for definitive Registered Notes, the Issuer and the Guarantor (if applicable) will appoint and maintain a paying agent in Singapore (the "Singapore Paying Agent"), where the definitive Registered Notes may be presented or surrendered for payment or redemption. In addition, in the event that a Permanent Registered Global Note is exchanged for definitive Registered Notes, announcement of such exchange shall be made by the Issuer and the Guarantor (if applicable) or on their behalf through the Singapore Stock Exchange and such announcement will include all material information with respect to the delivery of the definitive Registered Notes, including details of the Singapore Paying Agent. In the event of the occurrence of an Exchange Event, DTC, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Registered Global Note) may give notice to the Registrar requesting exchange and, in the event of the occurrence of an Exchange Event as described in (d) above, the Issuer and the Guarantor (if applicable) may also give notice to the Registrar requesting exchange. Any such exchange shall occur not later than ten days after the date of receipt of the first relevant notice by the Registrar.

Transfer of Interests

Interests in a Registered Global Note may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such interest in another Registered Global Note or in the form of a Definitive IAI Registered Note and Definitive IAI Registered Notes may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such Notes in the form of an interest in a Registered Global Note. No beneficial owner of an interest in a Registered Global Note will be able to transfer such interest, except in accordance with the applicable procedures of DTC, Euroclear and Clearstream, Luxembourg, in each case to the extent applicable. Registered Notes are also subject to the restrictions on transfer set forth therein and will bear a legend regarding such restrictions, see “Subscription and Sale and Transfer and Selling Restrictions.”

Pursuant to the Agency Agreement (as defined under “Terms and Conditions of the Notes”), the Principal Paying Agent shall arrange that, where a further Tranche of Notes is issued which is intended to form a single Series with an existing Tranche of Notes, the Notes of such further Tranche shall be assigned a common code and ISIN which are different from the common code and ISIN assigned to Notes of any other Tranche of the same Series until at least the expiry of the Distribution Compliance Period applicable to the Notes of such Tranche.

For so long as any of the Notes is represented by a Global Note (as defined in “Terms and Conditions of the Notes”) held on behalf of Euroclear and/or Clearstream, Luxembourg each person (other than Euroclear or Clearstream, Luxembourg) who is for the time being shown in the records of Euroclear or of Clearstream, Luxembourg as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear or Clearstream, Luxembourg as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer and the Guarantor (if applicable) and their respective agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and the Guarantor (if applicable) and their respective agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note, and the expressions “Noteholder” and “holder of Notes” and related expressions shall be construed accordingly.

So long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and such Notes except to the extent that in accordance with DTC’s published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Any reference herein to Euroclear, Clearstream, Luxembourg and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

The Notes may be accelerated by the holder thereof in certain circumstances described in Condition 11. In such circumstances, where any Note is still represented by a Global Note and the Global Note (or any part thereof) has become due and repayable in accordance with the terms and conditions of such Notes and payment in full of the amount due has not been made in accordance with the provisions of the Global Note, holders of interests in such Global Note credited to their accounts with DTC may require DTC to deliver Definitive Notes in registered form in exchange for their interest in such Global Note in accordance with DTC's standard operating procedures.

Form of Pricing Supplement

Set out below is the form of Pricing Supplement that will be completed for each Tranche of Notes issued under the Program.

[Date]

[Korea Resources Corporation/[New Issuer]]

Issue of [Aggregate Nominal Amount of Tranche] [Title of Notes]

under the US$3,000,000,000

Global Medium Term Note Program of Korea Resources Corporation

[as guaranteed by Korea Resources Corporation]

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Conditions set forth in the Offering Circular dated April 14, 2017 **[and the supplemental Offering Circular dated [●]]**. This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with such Offering Circular **[as so supplemented]**.

[The following alternative language applies if the first tranche of an issue that is being increased was issued under an Offering Circular with an earlier date.

Terms used herein shall be deemed to be defined as such for the purposes of the conditions (the "Conditions") set forth in the Offering Circular dated *[original date]. This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Offering Circular dated [current date], save in respect of the Conditions which are extracted from the Offering Circular dated [original date] and are attached hereto.]*

[Include whichever of the following apply or specify as "Not Applicable" (N/A). Note that the numbering should remain as set out below, even if "Not Applicable" is indicated for individual paragraphs or subparagraphs. Italics denote directions for completing the Pricing Supplements]

1.	(i) Issuer:	**Korea Resources Corporation/[NEW ISSUER]**
	[(ii) Guarantor:	Korea Resources Corporation *(delete for direct issues by Korea Resources Corporation)]*
2.	(i) Series Number:	[●]

	(ii) Tranche Number:	[●] *(If fungible with an existing Series, details of that Series, including the date on which the Notes become fungible)*
3.	Specified Currency or Currencies:	[●]
4.	Aggregate Nominal Amount:	
	(i) Series:	[●]
	(ii) Tranche:	[●]
5.	(i) Issue Price:	[●]% of the Aggregate Nominal Amount [plus accrued interest from [Issue Date] *(in the case of fungible issues only, if applicable)*]
	(ii) [Net proceeds: (required only for listed issues)	[●]]
6.	Specified Denominations: *(in the case of Registered Notes, this means the minimum integral amount* in which transfers can be made)	[●]
7.	(i) Issue Date:	[●]
	(ii) Interest Commencement Date:	[●]
8.	Maturity Date:	**[Fixed rate — *specify date*]** Floating rate — Interest Payment Date falling in [***specify months and year***]
9.	Interest Basis:	[[●]% **Fixed Rate] [[LIBOR/EURIBOR] +/- [●]% Floating Rate] [Zero Coupon] [Index Linked Interest] [Dual Currency Interest]** [***specify other***] (further particulars specified below)
10.	Redemption/Payment Basis:	**[Redemption at par] [Index Linked Redemption] [Dual Currency Redemption] [Partly Paid] [Installment]** [***specify other***]
11.	Change of Interest Basis or Redemption/Payment Basis:	**[Specify details of any provision for change of Notes into another Interest Basis or Redemption/ Payment Basis]**
12.	Put (other than Condition 8(d)(i))/Call Options:	**[Investor Put] [Issuer Call] [(further particulars specified below)]**
13.	(a) Status of the Notes:	**[Senior Notes/Senior Guaranteed Notes]**
	[(b) Status of the Guarantee:]	**[Senior]** *(delete for direct issues by Korea Resources Corporation)*

	[(c) Date of [the Issuer's Board] approval for the issues of Notes obtained:]	[●] *(N.B. Only relevant where Board (or similar) authorization is required for the particular tranche of Notes)*
	[(d) Date of [the Guarantor's Board] approval for the making of the Guarantee obtained:]	[●] *(N.B. Only relevant where Board (or similar) authorization is required for the Guarantee for the particular tranche of Notes; delete for direct issues by Korea Resources Corporation)*
14.	Listing:	**[Singapore/specify other/None]**
15.	Method of distribution:	**[Syndicated/Non-syndicated]**

PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE

16.	Fixed Rate Note Provisions:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Rate[(s)] of Interest:	[●]% per annum **[payable [annually/semi-annually/ quarterly] in arrears]** ***(If payable other than annually, consider amending Condition 6)***
	(ii) Interest Payment Date(s):	**[[●] in each year up to and including the Maturity Date]/[specify other]** [***N.B.: This will need to be amended in the case of long or short coupons***]
	(iii) Fixed Coupon Amount(s):	[●] per [ ] in nominal amount
	(iv) Broken Amount(s):	**[*Insert particulars of any initial or final broken interest amounts which do not correspond with the Fixed Coupon Amount*]**
	(v) Day Count Fraction:	**[30/360 or Actual/Actual (ICMA) or [*specify other*]]**
	(vi) Determination Date(s):	[●] in each year **[*Insert regular interest payment dates, ignoring issue date or maturity date in the case of a long or short first or last coupon NB: This will need to be amended in the case of regular interest payment dates which are not of equal duration. NB: Only relevant where Day Count Fraction is Actual/ Actual (ICMA)*]**
	(vii) Other terms relating to the method of calculating interest for Fixed Rate Notes:	**[None/*Give details*]**
17.	Floating Rate Note Provisions:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Specified Period(s)/Specified Interest Payment Dates:	[●]

(ii) Business Day Convention:	**[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/** [***specify other***]]
(iii) Additional Business Center(s):	[●]
(iv) Manner in which the Rate of Interest and Interest Amount is to be determined:	**[Screen Rate Determination/ISDA Determination/ *specify other***]
(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Principal Paying Agent):	[●]
(vi) Screen Rate Determination:	
— Reference Rate:	[●] *(Either LIBOR, EURIBOR or other, although additional information is required if other — including fallback provisions in the Agency Agreement)*
— Interest Determination Date(s):	[●] *(Second London business day prior to the start of each Interest Period if LIBOR (other than Sterling or euro LIBOR), first day of each Interest Period if Sterling LIBOR and the second day on which the TARGET 2 system is open prior to the start of each Interest Period if EURIBOR or euro LIBOR)*
— Relevant Screen Page:	[●] *(In the case of EURIBOR, if not Telerate Page 248 ensure it is a page which shows a composite rate or amend the fallback provisions appropriately)*
(vii) ISDA Determination:	
— Floating Rate Option:	[●]
— Designated Maturity:	[●]
— Reset Date:	[●]
(viii) Margin(s):	[+/-][●]% per annum
(ix) Minimum Rate of Interest:	[●]% per annum
(x) Maximum Rate of Interest:	[●]% per annum
(xi) Day Count Fraction:	[**Actual/365 Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360 30E/360 Other]** ***(See Condition 6 for alternatives)***
(xii) Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	[●]

18.	Zero Coupon Note Provisions:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Accrual Yield:	[●]% per annum
	(ii) Reference Price:	[●]
	(iii) Any other formula/basis of determining amount payable:	[●] *(Consider applicable day count fraction if euro denominated)*
	(iv) Day Count Fraction in relation to Early Redemption Amount and Late Payment on Zero Coupon Notes:	**[Condition 8(e)(iii) and Condition 8(j) apply/*specify other*] *(Consider applicable day count fraction if not U.S. dollar denominated)***
19.	Index Linked Interest Note Provisions:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Index/Formula:	***[give or annex details]***
	(ii) Calculation Agent responsible for calculating the interest due:	[●]
	(iii) Provisions for determining Coupon where calculation by reference to Index and/or Formula is impossible or impracticable:	[●]
	(iv) Specified Period(s)/Specified Interest Payment Dates:	[●]
	(v) Business Day Convention:	**[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/ *specify other*]**
	(vi) Additional Business Center(s):	[●]
	(vii) Minimum Rate of Interest:	[●]% per annum
	(viii) Maximum Rate of Interest:	[●]% per annum
	(ix) Day Count Fraction:	[●]
20.	Dual Currency Note Provisions:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Rate of Exchange/method of calculating Rate of Exchange:	**[*give details*]**
	(ii) Calculation Agent, if any, responsible for calculating the principal and/or interest payable:	[●]

	(iii) Provisions applicable where calculation by reference to Rate of Exchange impossible or impracticable:	[●]
	(iv) Person at whose option Specified Currency(ies) is/are payable:	[●]

PROVISIONS RELATING TO REDEMPTION

21.	Issuer Call:	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Optional Redemption Date(s):	[●]
	(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[●] per Note of [●] Specified Denomination
	(iii) If redeemable in part:	
	(a) Minimum Redemption Amount:	[●]
	(b) Higher Redemption Amount:	[●]
	(iv) Notice period (if other than as set out in the Conditions):	[●] *(N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer and the Guarantor (if applicable) are advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer, the Guarantor (if applicable) and the Principal Paying Agent)*
22.	Investor Put (other than Condition 8(d)(i)):	**[Applicable/Not Applicable]** ***(If not applicable, delete the remaining sub-paragraphs of this paragraph)***
	(i) Optional Redemption Date(s):	[●]
	(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[●] per Note of [●] Specified Denomination
	(iii) Notice period (if other than as set out in the Conditions):	[●] *(N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer and the Guarantor (if applicable) are advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer, the Guarantor (if applicable) and the Principal Paying Agent)*

23.	Final Redemption Amount of each Note:	[Par/*specify other*/see Appendix]
24.	Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 8(e)):	[●]

GENERAL PROVISIONS APPLICABLE TO THE NOTES

25.	Form of Notes:	**[Bearer Notes:** **[Temporary Bearer Global Note exchangeable for a Permanent Bearer Global Note which is exchangeable for Definitive Notes [on 60 days' notice given at any time/only upon an Exchange Event]]** **[Temporary Bearer Global Note exchangeable for Definitive Notes on and after the Exchange Date]** **[Permanent Bearer Global Note exchangeable for Definitive Notes [on 60 days' notice given at any time/ only upon an Exchange Event]]** **[Registered Notes:** **Regulation S Global Note (US$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg]/Rule 144A Global Note (US$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg]/Definitive IAI Registered Notes (specify nominal amounts)]**
26.	Additional Financial Center(s) or other special provisions relating to Payment Dates:	***[Not Applicable/give details] (Note that this item relates to the place of payment and not Interest Period end dates to which items 17(iii) and 19(vi) relate)***
27.	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	**[Yes/No.** ***If yes, give details]***
28.	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	**[Not Applicable/*give details. NB: new forms of Global Note(s) may be required for Partly Paid issues.*]**

29.	Details relating to Installment Notes: amount of each installment, date on which each payment is to be made:	**[Not Applicable/*give details]***
30.	Redenomination applicable:	Redenomination **[not]** applicable. **[*(If Redenomination is applicable, specify the applicable Day Count Fraction and any provisions necessary to deal with floating rate interest calculation (including alternative reference rates))] [(if Redenomination is applicable, specify the terms of the redenomination in an Annex to the Pricing Supplement)*]**
31.	Other terms or special conditions:	**[Not Applicable/give details]**
	DISTRIBUTION	
32.	(i) If syndicated, names of Managers:	**[Not Applicable/*give names*]**
	(ii) Stabilizing Manager (if any):	**[Not Applicable/*give name*]**
33.	If non-syndicated, name of relevant Dealer:	[●]
34.	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	**[TEFRA D/TEFRA C/TEFRA not applicable]**
35.	Additional selling restrictions:	**[Not Applicable/*give details*]** ***(If Item 34 confirms that either TEFRA C or TEFRA D applies, then specify each of the selling restrictions and representations that should be complied with to ensure that the issuance of Notes is U.S. Treas. Reg. § 1.163-5(c)(2)(i)(C) (i.e., TEFRA C) or U.S. Treas. Reg. § 1.163-5(c)(2)(i)(D) (i.e., TEFRA D) compliant, as applicable)***
	OPERATIONAL INFORMATION	
36.	Any clearing system(s) other than Euroclear and Clearstream, Luxembourg and the relevant identification number(s):	**[Not Applicable/*give name(s) and number(s)*]**
37.	Delivery:	Delivery **[against/free of]** payment
38.	In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:	**[Not Applicable/give location]**

39.	Additional Paying Agent(s) (if any):	[●]
	ISIN:	[●]
	Common Code:	[●]
	CUSIP:	[●]
	(insert here any other relevant codes such as CINS)	

[LISTING APPLICATION

This Pricing Supplement comprises the final terms required to list the issue of Notes described herein pursuant to the US$3,000,000,000 Global Medium Term Note Program of Korea Resources Corporation.]

RESPONSIBILITY

The Issuer accepts responsibility for the information contained in this Pricing Supplement, which, when read together with the Offering Circular **[and the supplemental Offering Circular]** referred to above, contains all information that is material in the context of the issue of the Notes.

Signed on behalf of the Issuer:

By:

Duly authorized

If the applicable Pricing Supplement specifies any modification to the Terms and Conditions of the Notes as described herein, it is envisaged that, to the extent that such modification relates only to Conditions 1, 5, 6, 7, 8 (except Condition 8(b)), 12, 13, 14, 15 (insofar as such Notes are not listed or admitted to trading on any stock exchange) or 17, they will not necessitate the preparation of a supplement to this Offering Circular. If the Terms and Conditions of the Notes of any Series are to be modified in any other respect, a supplement to this Offering Circular will be prepared, if appropriate.

TERMS AND CONDITIONS OF THE NOTES

The following are the Terms and Conditions of the Notes which will be incorporated by reference into each Global Note (as defined below) and each definitive Note, in the latter case only if permitted by the relevant stock exchange or other relevant authority (if any) and agreed by the Issuer and the relevant Dealer at the time of issue but, if not so permitted and agreed, such definitive Note will have endorsed thereon or attached thereto such Terms and Conditions. The applicable Pricing Supplement in relation to any Tranche of Notes may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with the following Terms and Conditions, replace or modify the following Terms and Conditions for the purpose of such Notes. The applicable Pricing Supplement (or the relevant provisions thereof) will be endorsed upon, or attached to, each Global Note and definitive Note. Reference should be made to "Form of the Notes" for a description of the content of the Pricing Supplements which will specify which of such terms are to apply in relation to the relevant Notes.

This Note is one of a Series (as defined below) of Notes issued by Korea Resources Corporation (the "Company") or any additional issuer which is a Subsidiary (as defined below) of the Company and has acceded to the Program by executing an accession agreement pursuant to the terms of the Agency Agreement (as defined below) (each of the Company and such additional issuers, in relation to the Notes issued by it, the "Issuer," and each of such additional issuers, excluding the Company, a "Guaranteed Issuer"). Notes issued by a Guaranteed Issuer will be guaranteed by the Company (in such capacity, the "Guarantor"). References to the Guarantor in the Terms and Conditions shall only be relevant in the context of Notes issued by a Guaranteed Issuer.

References herein to the "Notes" shall be references to the Senior Notes or the Senior Guaranteed Notes (each as defined in Condition 3 below), as the case may be, of this Series issued by the Issuer (and in the case of issuance by a Guaranteed Issuer, guaranteed by the Guarantor) and shall mean:

(a) in relation to any Notes represented by a global Note (a "Global Note"), units of the lowest Specified Denomination in the Specified Currency;

(b) any Global Note;

(c) any definitive Notes in bearer form ("Bearer Notes") issued in exchange for a Global Note in bearer form; and

(d) any definitive Notes in registered form ("Registered Notes") (whether or not issued in exchange for a Global Note in registered form).

The Notes, the Receipts (as defined below) and the Coupons (as defined below) are issued pursuant to, and have the benefit of the amended and restated agency agreement dated April 22, 2015 (as further amended and/or supplemented and/or restated from time to time, the "Agency Agreement"), and made between the Company, The Bank of New York Mellon, London Branch as issuing and principal paying agent (the "Principal Paying Agent," which expression shall include any successor agent) and the other paying agents named therein (together with the Principal Paying Agent, the "Paying Agents," which expression shall include any additional or successor paying agents), The Bank of New York Mellon as exchange agent (the "Exchange Agent," which expression shall include any additional or successor exchange agent) and as registrar (the "Registrar," which expression shall include any successor registrar) and a transfer agent and the other transfer agents named therein (together with the Registrar, the "Transfer Agent," which expression shall include any additional or successor transfer agents).

Interest-bearing definitive Bearer Notes have (unless otherwise indicated in the applicable Pricing Supplement) interest coupons ("Coupons") and, if indicated in the applicable Pricing Supplement, talons for further Coupons ("Talons") attached on issue. Any reference herein to Coupons or coupons shall, unless the context otherwise requires, be deemed to include a reference to Talons or talons. Definitive Bearer Notes repayable in installments have receipts ("Receipts") for the payment of the installments of principal (other than the final installment) attached on issue. Registered Notes and Global Notes do not have Receipts, Coupons or Talons attached on issue.

The Pricing Supplement for this Note (or the relevant provisions thereof) is attached to or endorsed on this Note and supplements these Terms and Conditions and may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Terms and Conditions, replace or modify these Terms and Conditions for the purposes of this Note. References to the "applicable Pricing Supplement" are to the Pricing Supplement (or the relevant provisions thereof) attached to or endorsed on this Note.

Any reference to "Noteholders" or "holders" in relation to any Notes shall mean (in the case of Bearer Notes) the holders of the Notes and (in the case of Registered Notes) the persons in whose name the Notes are registered and shall, in relation to any Notes represented by a Global Note, be construed as provided below. Any reference herein to "Receiptholders" shall mean the holders of the Receipts, and any reference herein to "Couponholders" shall mean the holders of the Coupons and shall, unless the context otherwise requires, include the holders of the Talons.

As used herein, "Tranche" means Notes which are identical in all respects (including as to listing) and "Series" means a Tranche of Notes together with any further Tranche or Tranches of Notes which are (a) expressed to be consolidated and form a single series and (b) identical in all respects (including as to listing) except for their respective Issue Dates, Interest Commencement Dates and/or Issue Prices.

Copies of the Agency Agreement are available for inspection during normal business hours at the specified office of each of the Principal Paying Agent, the Registrar and the other Paying Agents and Transfer Agents (such agents and the Registrar being together referred to as the "Agents"). Copies of the applicable Pricing Supplement are available for inspection during normal business hours at the specified office of each of the Agents except that, if this Note is an unlisted Note of any Series, the applicable Pricing Supplement will only be available for inspection by a Noteholder holding one or more unlisted Notes of such Series and such Noteholder must produce evidence satisfactory to the relevant Agent as to its holding of such Notes and identity. The Noteholders, the Receiptholders and the Couponholders are deemed to have notice of, and are entitled to the benefit of, all the provisions of the Agency Agreement and the Pricing Supplement which are applicable to them. The statements in these Terms and Conditions include summaries of, and are subject to, the detailed provisions of the Agency Agreement.

Words and expressions defined in the Agency Agreement or used in the applicable Pricing Supplement shall have the same meanings where used in these Terms and Conditions unless the context otherwise requires or unless otherwise stated and provided that, in the event of inconsistency between the Agency Agreement and the applicable Pricing Supplement, the applicable Pricing Supplement will prevail.

1. FORM, DENOMINATION AND TITLE

The Notes are in bearer form or in registered form as specified in the applicable Pricing Supplement and, in the case of definitive Notes, serially numbered, in the Specified Currency and the Specified Denomination(s). Notes of one Specified Denomination may not be exchanged for Notes of another Specified Denomination, and Bearer Notes may not be exchanged for Registered Notes and vice versa. The Notes of one Series may not comprise both Notes in bearer form and Notes in registered form.

This Note may be a Fixed Rate Note, a Floating Rate Note, a Zero Coupon Note, an Index Linked Interest Note, a Dual Currency Interest Note or a combination of any of the foregoing, depending upon the Interest Basis shown in the applicable Pricing Supplement.

This Note may be an Index Linked Redemption Note, an Installment Note, a Dual Currency Redemption Note, a Partly Paid Note or a combination of any of the foregoing, depending on the Redemption/ Payment Basis shown in the applicable Pricing Supplement.

Definitive Bearer Notes are issued with Coupons attached, unless they are Zero Coupon Notes in which case references to Coupons and Couponholders in these Terms and Conditions are not applicable.

Subject as set out below, title to the Bearer Notes, Receipts and Coupons will pass by delivery and title to the Registered Notes will pass upon registration of transfers in accordance with the provisions of the Agency Agreement. The Issuer, the Guarantor and the Paying Agents will (except as otherwise required by law) deem and treat the bearer of any Bearer Note, Receipt or Coupon and the registered holder of any Registered Note as the absolute owner thereof (whether or not overdue and notwithstanding any notice of ownership or writing thereon or notice of any previous loss or theft thereof) for all purposes but, in the case of any Global Note, without prejudice to the provisions set out in the next succeeding paragraph.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear Bank S.A./N.V. ("Euroclear"), as operator of the Euroclear system, and/or Clearstream Banking, société anonyme ("Clearstream, Luxembourg"), each person (other than Euroclear or Clearstream, Luxembourg) who is for the time being shown in the records of Euroclear or of Clearstream, Luxembourg as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear or Clearstream, Luxembourg as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer, the Guarantor and the Paying Agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer, the Guarantor and any Paying Agent as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note and the expressions "Noteholder" and "holder of Notes" and related expressions shall be construed accordingly.

For so long as The Depository Trust Company ("DTC") or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and the Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Notes that are represented by a Global Note will be transferable only in accordance with the rules and procedures for the time being of DTC, Euroclear and Clearstream, Luxembourg, as the case may be. References to DTC, Euroclear and/or Clearstream, Luxembourg shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

2. TRANSFERS OF REGISTERED NOTES

(a) Transfers of interests in Registered Global Notes

Transfers of beneficial interests in Registered Global Notes will be effected by DTC, Euroclear or Clearstream, Luxembourg, as the case may be, and, in turn, by other participants and, if appropriate, indirect participants in such clearing systems acting on behalf of beneficial transferors and transferees of such interests. A beneficial interest in a Registered Global Note will, subject to compliance with all applicable legal and regulatory restrictions, be transferable for Notes in definitive form or for a beneficial interest in another Registered Global Note only in the authorized denominations set out in the applicable Pricing Supplement and only in accordance with the rules and operating procedures for the time being of DTC, Euroclear or Clearstream, Luxembourg, as the case may be, and in accordance with the terms and conditions specified in the Agency Agreement. Transfers of a Registered Global Note registered in the name of a nominee for DTC shall be limited to transfers of such Registered Global Note, in whole but not in part, to another nominee of DTC or to a successor of DTC or such successor's nominee.

(b) Transfers of Registered Notes in definitive form

Subject as provided in paragraphs (e), (f) and (g) below, upon the terms and subject to the conditions set forth in the Agency Agreement, a Registered Note in definitive form may be transferred in whole or in part (in the authorized denominations set out in the applicable Pricing Supplement). In order to effect any such transfer (i) the holder or holders must (A) surrender the Registered Note for registration of the transfer of the Registered Note (or the relevant part of the Registered Note) at the specified office of the Registrar or any Transfer Agent, with the form of transfer thereon duly executed by the holder or holders thereof or his or their attorney or attorneys duly authorized in writing and (B) complete and deposit such other certifications as may be required by the Registrar or, as the case may be, the relevant Transfer Agent and (ii) the Registrar or, as the case may be, the relevant Transfer Agent must, after due and careful enquiry, be satisfied with the documents of title and the identity of the person making the request. Any such transfer will be subject to such reasonable regulations as the Issuer and the Registrar may from time to time prescribe (the initial such regulations being set out in Schedule 10 to the Agency Agreement). Subject as provided above, the Registrar or, as the case may be, the relevant Transfer Agent will, within three business days (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar or, as the case may be, the relevant Transfer Agent is located) of the request (or such longer period as may be required to comply with any applicable fiscal or other laws or regulations), authenticate and deliver, or procure the authentication and delivery of, at its specified office to the transferee or (at the risk of the transferee) send by uninsured mail, to such address as the transferee may request, a new Registered Note in definitive form of a like aggregate nominal amount to the Registered Note (or the relevant part of the Registered Note) transferred. In the case of the transfer of part only of a Registered Note in definitive form, a new Registered Note in definitive form in respect of the balance of the Registered Note not transferred will be so authenticated and delivered or (at the risk of the transferor) sent to the transferor.

(c) Registration of transfer upon partial redemption

In the event of a partial redemption of Notes under Condition 8, the Issuer shall not be required to register the transfer of any Registered Note, or part of a Registered Note, called for partial redemption.

(d) Costs of registration

Noteholders will not be required to bear the costs and expenses of effecting any registration of transfer as provided above, except for any costs or expenses of delivery other than by regular uninsured mail and except that the Issuer (or the Guarantor, as applicable) may require the payment of a sum sufficient to cover any stamp duty, tax or other Governmental charge that may be imposed in relation to the registration.

(e) Transfers of interests in Regulation S Global Notes

Prior to expiry of the applicable Distribution Compliance Period, transfers by the holder of, or of a beneficial interest in, a Regulation S Global Note to a transferee in the United States or who is a U.S. person will only be made:

(i) upon receipt by the Registrar of a written certification substantially in the form set out in Schedule 8 to the Agency Agreement, amended as appropriate (a "Transfer Certificate"), copies of which are available from the specified office of the Registrar or any Transfer Agent, from the transferor of the Note or beneficial interest therein to the effect that such transfer is being made:

(A) to a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or

(B) to a person who is an Institutional Accredited Investor, subject to delivery of the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an "IAI Investment Letter"); or

(ii) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer and the Guarantor of such satisfactory evidence as the Issuer and the Guarantor may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable securities laws of any state of the United States,

and, in each case, in accordance with any applicable securities laws of any state of the United States or any other jurisdiction.

In the case of (A) above, such transferee may take delivery through a Legended Note in global or definitive form and, in the case of (B) above, such transferee may take delivery only through a Legended Note in definitive form. After expiry of the applicable Distribution Compliance Period (i) beneficial interests in Regulation S Global Notes registered in the name of a nominee for DTC may be held through DTC directly, by a participant in DTC, or indirectly through a participant in DTC and (ii) such certification requirements will no longer apply to such transfers.

(f) Transfers of interests in Legended Notes

Transfers of Legended Notes or beneficial interests therein may be made:

(i) to a transferee who takes delivery of such interest through a Regulation S Global Note, upon receipt by the Registrar of a duly completed Transfer Certificate from the transferor to the effect that such transfer is being made in accordance with Regulation S and that in the case of a Regulation S Global Note registered in the name of a nominee for DTC, if such transfer is being made prior to expiry of the applicable Distribution Compliance Period, the interests in the Notes being transferred will be held immediately thereafter through Euroclear and/or Clearstream, Luxembourg; or

(ii) to a transferee who takes delivery of such interest through a Legended Note:

(A) where the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, without certification; or

(B) where the transferee is an Institutional Accredited Investor, subject to delivery to the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, together with a duly executed IAI Investment Letter from the relevant transferee; or

(iii) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer and the Guarantor of such satisfactory evidence as the Issuer and the Guarantor may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable securities laws of any state of the United States,

and, in each case, in accordance with any applicable securities laws of any state of the United States or any other jurisdiction.

Notes transferred by Institutional Accredited Investors to QIBs pursuant to Rule 144A or outside the United States pursuant to Regulation S will be eligible to be held by such QIBs or non-U.S. investors through DTC, Euroclear or Clearstream, Luxembourg, as appropriate, and the Registrar will arrange for any Notes which are the subject of such a transfer to be represented by the appropriate Registered Global Note, where applicable.

Upon the transfer, exchange or replacement of Legended Notes, or upon specific request for removal of the Legend, the Registrar shall deliver only Legended Notes or refuse to remove the Legend, as the case may be, unless there is delivered to the Issuer and the Guarantor such satisfactory evidence as may reasonably be required by the Issuer and the Guarantor, which may include an opinion of U.S. counsel, that neither the Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act.

(g) Exchanges and transfers of Registered Notes generally

Holders of Registered Notes in definitive form, other than Institutional Accredited Investors, may exchange such Notes for interests in a Registered Global Note of the same type at any time.

(h) Definitions

In this Condition, the following expressions shall have the following meanings:

"*Distribution Compliance Period*" means the period that ends 40 days after the completion of the distribution of each Tranche of Notes, as certified by the relevant Dealer (in the case of a non-syndicated issue) or the relevant Lead Manager (in the case of a syndicated issue);

"*Institutional Accredited Investor*" means "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7)) under the Securities Act that are institutions;

"*Legended Note*" means Registered Notes in definitive form that are issued to Institutional Accredited Investors and Registered Notes (whether in definitive form or represented by a Registered Global Note) sold in private transactions to QIBs in accordance with the requirements of Rule 144A;

"*QIB*" means a "qualified institutional buyer" within the meaning of Rule 144A;

"*Regulation S*" means Regulation S under the Securities Act;

"*Regulation S Global Note*" means a Registered Global Note representing Notes sold outside the United States in reliance on Regulation S;

"*Rule 144A*" means Rule 144A under the Securities Act;

"*Rule 144A Global Note*" means a Registered Global Note representing Notes sold in the United States or to QIBs; and

"*Securities Act*" means the United States Securities Act of 1933, as amended.

3. STATUS OF THE NOTES; GUARANTEE

(a) Senior Notes

This paragraph (a) is applicable to all Notes which are specified in the applicable Pricing Supplement as being Senior Notes issued by the Company (the "Senior Notes").

The Senior Notes and any Receipts and Coupons relating thereto are direct, senior, unconditional, unsubordinated and (subject to Condition 4) unsecured general obligations of the Company and shall at all times rank *pari passu*, without any preference among themselves and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Company, from time to time outstanding.

(b) Senior Guaranteed Notes

This paragraph (b) is applicable to all Notes which are specified in the applicable Pricing Supplement as being Senior Guaranteed Notes issued by a Guaranteed Issuer (the "Senior Guaranteed Notes").

The Senior Guaranteed Notes and any Receipts and Coupons relating thereto are direct, senior, unconditional, unsubordinated and (subject to Condition 4) unsecured general obligations of the relevant Guaranteed Issuer and shall at all times rank *pari passu*, without any preference among themselves and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of such Guaranteed Issuer, from time to time outstanding.

The Senior Guaranteed Notes and any Receipts and Coupons relating thereto are guaranteed as to payment of principal and interest by the Guarantor as set forth in paragraph (c) below.

In relation to each Series of Senior Guaranteed Notes and any Receipts and Coupons relating thereto, claims in respect of the Guarantee (as defined below) shall at all times rank *pari passu* and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Guarantor, from time to time outstanding.

(c) Guarantee

The Guarantor unconditionally and irrevocably guarantees to each holder of the Senior Guaranteed Notes and any Receipts and Coupons relating thereto the due payment of all amounts owing from time to time under the Senior Guaranteed Notes and the related Receipts and Coupons (the "Guarantee").

The Guarantee is a guarantee of payment and not a guarantee of collection.

The Guarantee is a direct, senior, unconditional, unsubordinated and (subject to Condition 4) unsecured general obligation of the Guarantor and shall at all times rank *pari passu* and (except for certain obligations required to be preferred by applicable law) equally with all other unsecured and unsubordinated general obligations of the Guarantor, from time to time outstanding.

4. CERTAIN COVENANTS

(a) Negative Pledge

So long as any of the Notes of this Series remains outstanding, the Company will not itself, and will not permit any Principal Subsidiary (as defined below) to, create or permit to be outstanding any mortgage, charge, lien, pledge or other security interest ("Security") upon the whole or part of its property, assets or revenues, 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 or (ii) any payment under any guarantee of any such International Investment Securities or (iii) any payment under any indemnity or other like obligation relating to any such International Investment Securities, without in any such case at the same time, according to the Notes of this Series and the Receipts and Coupons applicable thereto, either the same security as is granted to or is outstanding in respect of such International Investment Securities, guarantee, indemnity or other like obligation or such other security as shall be approved by an Extraordinary Resolution (as defined in the Agency Agreement) passed at a meeting of the holders of Notes of this Series.

The foregoing shall not operate to restrict or prohibit (i) the creation or existence of any Security consisting of a security interest solely in Receivables (as defined below) securing payment of interest or principal of, payment under any guarantee of, or payment under any indemnity relating to, any International Investment Securities issued by a wholly-owned Subsidiary (or another Person in which the Company or any Principal

Subsidiary makes an investment and to which the Company or any Principal Subsidiary transfers Receivables and related assets) and (ii) the creation of any Security over the assets of, and/or shareholder interest in, a capital project securing payment of interest or principal of, payment under any guarantee of, or payment under any indemnity relating to, any International Investment Securities issued by the Company or that Principal Subsidiary, where the International Investment Securities are issued to finance such capital project and the financier's rights of recovery are limited to the assets of, and/or shareholder interest in, such capital project.

In this Condition, a "capital project" means a long-term investment project to acquire, develop, improve, and/or maintain mineral resources or mineral resources exploration, development and production related equipment.

(b) Consolidation, Merger and Sale of Assets

Each of the Issuers and the Guarantor, without the consent of the Noteholders, may consolidate with, or merge into, or sell, transfer, lease or convey its assets as an entirety or substantially as an entirety to any corporation; provided that (i) any successor corporation expressly assumes the applicable obligations of the Issuer or the Guarantor, as the case may be, under the Notes, the Guarantee (if applicable) and the Agency Agreement, as the case may be, (ii) after giving effect to the transaction, with respect to the Issuer or the Guarantor, as the case may be, or any such successor corporation, no Event of Default (as defined below) and no event which, after notice or lapse of time or both, would become an Event of Default, shall have occurred and be continuing and (iii) the Issuer or the Guarantor, as the case may be, has delivered to the Principal Paying Agent a certificate executed by a duly authorized officer of the Issuer or the Guarantor, as the case may be, and an opinion of counsel as to matters of law stating that such consolidation, merger, sale, transfer, lease or conveyance and, if a supplemental agency agreement is required in connection with such transaction, such supplemental agency agreement comply with the Agency Agreement and the Notes and that all conditions precedent herein provided for relating to such transaction have been complied with.

(c) Provision of Information to Noteholders

Each of the Issuers and the Guarantor covenants that for so long as any of the Notes are "restricted securities" within the meaning of Rule 144 under the Securities Act, it will, at any time when it is not subject to either the periodic reporting requirements of Section 13 or Section 15(d) of the Exchange Act or the requirements of Rule 12g3-2(b) thereunder, provide to any Noteholder or prospective purchaser of Notes designated by such Noteholder, upon the request of such Noteholder or prospective purchaser, the information required to be provided by Rule 144A(d)(4) under the Securities Act.

(d) Certain Definitions

In this Condition, the following expressions shall have the following meanings:

"*International Investment Securities*" means notes, debentures, bonds or investment securities of the Company which:

(A) either are by their terms payable, or confer a right to receive payment, in any currency other than Won or are denominated in Won and more than 50% of the aggregate principal amount thereof is initially distributed outside Korea by or with the authorization of the Company; and

(B) 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.

"*Person*" means any individual, corporation, company, firm, tribunal, undertaking, association, organization, partnership, joint venture, trust, limited liability company, unincorporated organization or government or any agency, instrumentality or political subdivision thereof; in each case whether or not being a separate legal entity.

"*Principal Subsidiary*" means:

(i) any Subsidiary (as defined below) of the Company:

(x) whose net sales, as shown by the then latest audited financial statements or accounts (consolidated where applicable, but without intercompany adjustments for consolidation with the Company) of such Subsidiary, constitute at least 10% of the consolidated net sales of the Company as shown by the then latest audited consolidated accounts of the Company; or

(y) whose total assets, as shown by the then latest audited financial statements or accounts (consolidated where applicable, but without intercompany adjustments for consolidation with the Company) of such Subsidiary, constitute at least 10% of the total consolidated assets of the Company as shown by the then latest audited consolidated accounts of the Company;

provided that:

(1) in the case of a Subsidiary acquired, or a company becoming a Subsidiary, after the end of the financial period to which the latest audited consolidated accounts of the Company relate, the reference to the then latest audited consolidated accounts of the Company for the purposes of the calculation above shall, until audited consolidated accounts of the Company for the financial period in which the acquisition is made or, as the case may be, in which the relevant company becomes a Subsidiary are published, be deemed to be a reference to the then latest audited consolidated accounts of the Company adjusted to consolidate the last audited accounts (consolidated where applicable) of such Subsidiary in such accounts;

(2) if at any relevant time in relation to the Company or any Subsidiary in respect of which financial consolidation is relevant no consolidated accounts are prepared and audited, net sales and total assets of the Company and/or any such Subsidiary shall be determined on the basis of pro-forma consolidated accounts prepared for this purpose by the auditors for the time being of the Company;

(3) if at any relevant time in relation to any Subsidiary no accounts are audited, its net sales and total assets (consolidated where applicable, but without intercompany adjustments for consolidation with the Company) shall be determined on the basis of pro-forma accounts (consolidated where applicable, but without intercompany adjustments for consolidation with the Company) of the relevant Subsidiary prepared for this purpose by the auditors for the time being of the Company; and

(4) if the accounts of any Subsidiary (not being a Subsidiary referred to in proviso (1) above) are not consolidated with those of the Company, then the determination of whether or not such Subsidiary is a Principal Subsidiary shall be based on a pro-forma consolidation of its accounts (consolidated where applicable, but without intercompany adjustments for consolidation with the Company) with the then latest consolidated audited accounts (determined on the basis of the foregoing) of the Company; or

(ii) any Subsidiary of the Company to which is transferred all or substantially all of the assets of a Subsidiary which immediately prior to such transfer was a Principal Subsidiary, provided that the Principal Subsidiary which so transfers its assets shall forthwith upon such transfer cease to be a Principal Subsidiary.

"Receivable" means a right to receive payment arising from a sale or lease of goods (including mineral resources reserves and equipment) or the performance of services by a Person pursuant to an arrangement with another Person pursuant to which such other Person is obligated to pay for such goods or services under terms that permit the purchase of such goods and services on credit.

"*Relevant GAAP*" shall mean such accounting principles which are generally accepted in Korea at the date or time of any computation.

"*Subsidiary*" means, at any particular time, (i) any person at least 50% of whose issued equity share capital (or equivalent) is then beneficially owned, by the Company, (ii) any person which is then directly or indirectly controlled by the Company or (iii) any subsidiary subject to consolidation with the Company's financial statements under Relevant GAAP. For a person to be "controlled" by another means that the other (whether directly or indirectly and whether by the ownership of share capital, the possession of voting power, contract or otherwise) has the power to appoint and/or remove a majority of the members of the board of directors or other governing body of that person or otherwise controls or has the power to control the affairs and policies of that person.

5. REDENOMINATION

(a) Redenomination

Where redenomination is specified in the applicable Pricing Supplement as being applicable, the Issuer may, without the consent of the Noteholders, the Receiptholders and the Couponholders, on giving prior notice to the Principal Paying Agent, DTC, Euroclear and Clearstream, Luxembourg and at least 30 days' prior notice to the Noteholders in accordance with Condition 15, elect that, with effect from the Redenomination Date specified in the notice, the Notes shall be redenominated in euro.

The election will have effect as follows:

(i) the Notes and the Receipts shall be deemed to be redenominated in euro in the denomination of €0.01 with a nominal amount for each Note and Receipt equal to the nominal amount of that Note or Receipt in the Specified Currency, converted into euro at the Established Rate, provided that, if the Issuer determines, with the agreement of the Principal Paying Agent, that the then market practice in respect of the redenomination in euro of internationally offered securities is different from the provisions specified above, such provisions shall be deemed to be amended so as to comply with such market practice and the Issuer shall promptly notify the Noteholders, the stock exchange (if any) on which the Notes may be listed and the Paying Agents of such deemed amendments;

(ii) save to the extent that an Exchange Notice has been given in accordance with paragraph (iv) below, the amount of interest due in respect of the Notes will be calculated by reference to the aggregate nominal amount of Notes presented (or, as the case may be, in respect of which Coupons are presented) for payment by the relevant holder and the amount of such payment shall be rounded down to the nearest €0.01;

(iii) if definitive Notes are required to be issued after the Redenomination Date, they shall be issued at the expense of the Issuer in the denominations of €1,000, €10,000, €100,000 and (but only to the extent of any remaining amounts less than €1,000 or such smaller denominations as the Principal Paying Agent may approve) €0.01 and such other denominations as the Principal Paying Agent shall determine and notify to the Noteholders;

(iv) if issued prior to the Redenomination Date, all unmatured Coupons denominated in the Specified Currency (whether or not attached to the Notes) will become void with effect from the date on which the Issuer gives notice (the "Exchange Notice") that replacement euro-denominated Notes, Receipts and Coupons are available for exchange (provided that such securities are so available) and no payments will be made in respect of them. The payment obligations contained in any Notes and Receipts so issued will also become void on that date although those Notes and Receipts will continue to constitute valid exchange obligations of the Issuer. New euro-denominated Notes, Receipts and Coupons will be issued in exchange for Notes, Receipts and Coupons denominated in the Specified Currency in such manner as the Principal

Paying Agent may specify and as shall be notified to the Noteholders in the Exchange Notice. No Exchange Notice may be given less than 15 days prior to any date for payment of principal or interest on the Notes;

(v) after the Redenomination Date, all payments in respect of the Notes, the Receipts and the Coupons, other than payments of interest in respect of periods commencing before the Redenomination Date, will be made solely in euro as though references in the Notes to the Specified Currency were to euro. Payments will be made in euro by credit or transfer to a euro account (or any other account to which euro may be credited or transferred) specified by the payee or, at the option of the payee, by a euro check;

(vi) if the Notes are Fixed Rate Notes and interest for any period ending on or after the Redenomination Date is required to be calculated for a period ending other than on an Interest Payment Date, it will be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention;

(vii) if the Notes are Floating Rate Notes, the applicable Pricing Supplement will specify any relevant changes to the provisions relating to interest; and

(viii) such other changes shall be made to this Condition as the Issuer may decide, after consultation with the Principal Paying Agent, and as may be specified in the notice, to conform it to conventions then applicable to instruments denominated in euro.

(b) Definitions

In the Terms and Conditions, the following expressions have the following meanings:

"*Established Rate*" means the rate for the conversion of the Specified Currency (including compliance with rules relating to rounding in accordance with applicable European Community regulations) into euro established by the Council of the European Union pursuant to Article 123 of the Treaty;

"€" and "*euro*" means the currency introduced at the start of the third stage of European economic and monetary union pursuant to the Treaty;

"*Redenomination Date*" means (in the case of interest bearing Notes) any date for payment of interest under the Notes or (in the case of Zero Coupon Notes) any date, in each case specified by the Issuer in the notice given to the Noteholders pursuant to paragraph (a) above and which falls on or after the date on which the country of the Specified Currency first participates in the third stage of European economic and monetary union; and

"*Treaty*" means the Treaty establishing the European Community, as amended.

6. INTEREST

(a) Interest on Fixed Rate Notes

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum equal to the Rate(s) of Interest. Interest will be payable in arrears on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

Except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on (but excluding) such date will amount to the

Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

As used in the Conditions, "Fixed Interest Period" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date.

If interest is required to be calculated for a period ending other than a Fixed Interest Period, such interest shall be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention.

"*Day Count Fraction*" means, in respect of the calculation of an amount of interest in accordance with this Condition 6(a):

(i) if "Actual/Actual (ICMA)" is specified in the applicable Pricing Supplement:

(a) in the case of Notes where the number of days in the relevant period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (the "Accrual Period") is equal to or shorter than the Determination Period during which the Accrual Period ends, the number of days in such Accrual Period divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; or

(b) in the case of Notes where the Accrual Period is longer than the Determination Period during which the Accrual Period ends, the sum of:

(1) the number of days in such Accrual Period falling in the Determination Period in which the Accrual Period begins divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year; and

(2) the number of days in such Accrual Period falling in the next Determination Period divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year; and

(ii) if "30/360" is specified in the applicable Pricing Supplement, the number of days in the period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (such number of days being calculated on the basis of a year of 360 days with 12 30-day months) divided by 360.

In the Conditions:

"*Determination Period*" means each period from (and including) a Determination Date to (but excluding) the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after, such Determination Date); and

"*sub-unit*" means, with respect to any currency other than euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, with respect to euro, means one cent.

(b) Interest on Floating Rate Notes and Index Linked Interest Notes

(i) Interest Payment Dates

Each Floating Rate Note and Index Linked Interest Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date and such interest will be payable in arrears on either:

(A) the Specified Interest Payment Date(s) (each an "Interest Payment Date") in each year specified in the applicable Pricing Supplement; or

(B) if no Specified Interest Payment Date(s) is/are specified in the applicable Pricing Supplement, each date (each an "Interest Payment Date") which falls the number of months or other period specified as the Specified Period in the applicable Pricing Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

Such interest will be payable in respect of each Interest Period (which expression shall, in these Terms and Conditions, mean the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date).

If a Business Day Convention is specified in the applicable Pricing Supplement and (x) if there is no numerically corresponding day on the calendar month in which an Interest Payment Date should occur or (y) if any Interest Payment Date would otherwise fall on a day that is not a Business Day, then, if the Business Day Convention specified is:

(1) in any case where Specified Periods are specified in accordance with Condition 6(b)(i)(B) above, the Floating Rate Convention, such Interest Payment Date (i) in the case of (x) above, shall be the last day that is a Business Day in the relevant month and the provisions of (B) below shall apply mutatis mutandis or (ii) in the case of (y) above, shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event (A) such Interest Payment Date shall be brought forward to the immediately preceding Business Day and (B) each subsequent Interest Payment Date shall be the last Business Day in the month which falls the Specified Period after the preceding applicable Interest Payment Date occurred; or

(2) the Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day; or

(3) the Modified Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event such Interest Payment Date shall be brought forward to the immediately preceding Business Day; or

(4) the Preceding Business Day Convention, such Interest Payment Date shall be brought forward to the immediately preceding Business Day.

In these Terms and Conditions, "Business Day" means a day that 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) the Additional Business Center(s) specified in the applicable Pricing Supplement; and

(B) either (1) in relation to any sum payable in a Specified Currency other than euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial center of the country of the relevant Specified Currency (if other than the Additional Business Center(s) and which, if the Specified Currency is Australian dollars or New Zealand dollars, shall be Melbourne or Wellington, respectively) or (2) in relation to any sum payable in euro, a day on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET 2) System (the "TARGET 2 System") is open.

(ii) Rate of Interest

The Rate of Interest payable from time to time in respect of Floating Rate Notes and Index Linked Interest Notes will be determined in the manner specified in the applicable Pricing Supplement.

(A) ISDA Determination for Floating Rate Notes

Where ISDA Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any). For the purposes of this sub-paragraph (A), "ISDA Rate" for an Interest Period means a rate equal to the Floating Rate that would be determined by the Principal Paying Agent under an interest rate swap transaction if the Principal Paying Agent were acting as Calculation Agent for that swap transaction under the terms of an agreement incorporating the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. and as amended and updated as at the Issue Date of the first Tranche of the Notes of this Series (the "ISDA Definitions") and under which:

(1) the Floating Rate Option is as specified in the applicable Pricing Supplement;

(2) the Designated Maturity is a period specified in the applicable Pricing Supplement; and

(3) the relevant Reset Date is either (i) if the applicable Floating Rate Option is based on the London inter-bank offered rate ("LIBOR") or on the Euro-zone inter-bank offered rate ("EURIBOR"), the first day of that Interest Period or (ii) in any other case, as specified in the applicable Pricing Supplement.

For the purposes of this sub-paragraph (A), "Floating Rate," "Calculation Agent," "Floating Rate Option," "Designated Maturity" and "Reset Date" have the meanings given to those terms in the ISDA Definitions.

(B) Screen Rate Determination for Floating Rate Notes

Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will, subject as provided below, be either:

(1) the offered quotation; or

(2) the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the offered quotations, (expressed as a percentage rate per annum) for the Reference Rate which appears or appear, as the case may be, on the Relevant Screen Page as at 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR) on the Interest Determination Date in question plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any), all as determined by the Principal Paying Agent. If five or more of such offered quotations are available on the Relevant Screen Page, the highest (or, if there is more than one such highest quotation, one only of such quotations) and the lowest (or, if there is more than one such lowest quotation, one only of such quotations) shall be disregarded by the Principal Paying Agent for the purpose of determining the arithmetic mean (rounded as provided above) of such offered quotations.

The Agency Agreement contains provisions for determining the Rate of Interest in the event that the Relevant Screen Page is not available or if, in the case of (1) above, no such offered quotation appears or, in the case of (2) above, fewer than three such offered quotations appear, in each case as at the time specified in the preceding paragraph.

If the Reference Rate from time to time in respect of Floating Rate Notes is specified in the applicable Pricing Supplement as being other than LIBOR or EURIBOR, the Rate of Interest in respect of such Notes will be determined as provided in the applicable Pricing Supplement.

(iii) Minimum Rate of Interest and/or Maximum Rate of Interest

If the applicable Pricing Supplement specifies a Minimum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is less than such Minimum Rate of Interest, the Rate of Interest for such Interest Period shall be such Minimum Rate of Interest.

If the applicable Pricing Supplement specifies a Maximum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is greater than such Maximum Rate of Interest, the Rate of Interest for such Interest Period shall be such Maximum Rate of Interest.

(iv) Determination of Rate of Interest and calculation of Interest Amounts

The Principal Paying Agent, in the case of Floating Rate Notes, and the Calculation Agent, in the case of Index Linked Interest Notes, will at or as soon as practicable after each time at which the Rate of Interest is to be determined, determine the Rate of Interest for the relevant Interest Period. In the case of Index Linked Interest Notes, the Calculation Agent will notify the Principal Paying Agent of the Rate of Interest for the relevant Interest Period as soon as practicable after calculating the same.

The Principal Paying Agent will calculate the amount of interest (the "Interest Amount") payable on the Floating Rate Notes or Index Linked Interest Notes in respect of each Specified Denomination for the relevant Interest Period. Each Interest Amount shall be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention.

"*Day Count Fraction*" means, in respect of the calculation of an amount of interest in accordance with this Condition 6(b):

(i) if "Actual/365" or "Actual/Actual" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 (or, if any portion of that Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);

(ii) if "Actual/365 (Fixed)" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365;

(iii) if "Actual/365 (Sterling)" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 or, in the case of an Interest Payment Date falling in a leap year, 366;

(iv) if "Actual/360" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 360;

(v) if "30/360," "360/360" or "Bond Basis" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360 (the number of days to be calculated on the basis of a year of 360 days with 12 30-day months (unless (a) the last day of the Interest Period is the 31st day of a month but the first day of the Interest Period is a day other than the 30th or 31st day of a month, in which case the month that includes that last day shall not be considered to be shortened to a 30-day month, or (b) the last day of the Interest Period is the last day of the month of February, in which case the month of February shall not be considered to be lengthened to a 30-day month)); and

(vi) if "30E/360" or "Eurobond Basis" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360 (the number of days to be calculated on the basis of a year of 360 days with 12 30-day months, without regard to the date of the first day or last day of the Interest Period unless, in the case of the final Interest Period, the Maturity Date is the last day of the month of February, in which case the month of February shall not be considered to be lengthened to a 30-day month).

(v) Notification of Rate of Interest and Interest Amounts

The Principal Paying Agent will cause the Rate of Interest and each Interest Amount for each Interest Period and the relevant Interest Payment Date to be notified to the Issuer and the Guarantor and notices to Noteholders will be published in accordance with Condition 15 as soon as possible after their determination but in no event later than the fourth London Business Day thereafter. Each Interest Amount and Interest Payment Date so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without prior notice in the event of an extension or shortening of the Interest Period. Any such amendment will be promptly notified to each stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to the Noteholders in accordance with Condition 15. For the purposes of this paragraph, the expression "London Business Day" means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for general business (including dealing in foreign exchange and foreign currency deposits) in London.

(vi) Certificates to be final

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 6(b), whether by the Principal Paying Agent or, if applicable, the Calculation Agent, shall (in the absence of willful default, bad faith or manifest error) be binding on the Issuer, the Guarantor (if applicable), the Principal Paying Agent, the Calculation Agent (if applicable), the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability to the Issuer, the Guarantor (if applicable), the Noteholders, the Receiptholders or the Couponholders shall attach to the Principal Paying Agent or the Calculation Agent (if applicable) in connection with the exercise or non-exercise by it of its powers, duties and discretions pursuant to such provisions.

(c) Interest on Dual Currency Notes

The rate or amount of interest payable in respect of Dual Currency Interest Notes shall be determined in the manner specified in the applicable Pricing Supplement.

(d) Interest on Partly Paid Notes

In the case of Partly Paid Notes (other than Partly Paid Notes which are Zero Coupon Notes), interest will accrue as aforesaid on the paid-up nominal amount of such Notes and otherwise as specified in the applicable Pricing Supplement.

(e) Accrual of interest

Each Note (or in the case of the redemption of part only of a Note, that part only of such Note) will cease to bear interest (if any) from the date for its redemption unless, upon due presentation thereof, payment of principal is improperly withheld or refused. In such event, interest will continue to accrue until whichever is the earlier of:

(1) the date on which all amounts due in respect of such Note have been paid; and

(2) five days after the date on which the full amount of the moneys payable in respect of such Note has been received by the Principal Paying Agent or the Registrar, as the case may be, and notice to that effect has been given to the Noteholders in accordance with Condition 15.

7. PAYMENTS

(a) Method of payment

Subject as provided below:

(i) payments in a Specified Currency other than euro will be made by credit or transfer to an account in the relevant Specified Currency (which, in the case of a payment in Japanese Yen to a non-resident of Japan, shall be a non-resident account) maintained by the payee with, or, at the option of the payee, by a check in such Specified Currency drawn on, a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars or New Zealand dollars, shall be Melbourne or Wellington, respectively); and

(ii) payments in euro will be made by credit or transfer to a euro account (or any other account to which euro may be credited or transferred) specified by the payee or, at the option of the payee, by a euro check.

Payments will be subject in all cases to any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 9.

(b) Presentation of definitive Bearer Notes, Receipts and Coupons

Payments of principal in respect of definitive Bearer Notes will (subject as provided below) be made in the manner provided in paragraph (a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of definitive Bearer Notes, and payments of interest in respect of definitive Bearer Notes will (subject as provided below) be made as aforesaid only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of Coupons, in each case at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America (including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction)).

Payments of installments of principal (if any) in respect of definitive Bearer Notes, other than the final installment, will (subject as provided below) be made in the manner provided in paragraph (a) above against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Receipt in accordance with the preceding paragraph. Payment of the final installment will be made in the manner provided in paragraph (a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Bearer Note in accordance with the preceding paragraph. Each Receipt must be presented for payment of the relevant installment together with the definitive Bearer Note to which it appertains. Receipts presented without the definitive Bearer Note to which they appertain do not constitute valid obligations of the Issuer. Upon the date on which any definitive Bearer Note becomes due and repayable, unmatured Receipts (if any) relating thereto (whether or not attached) shall become void and no payment shall be made in respect thereof.

Fixed Rate Notes in definitive bearer form (other than Dual Currency Notes, Index Linked Notes or Long Maturity Notes (as defined below)) should be presented for payment together with all unmatured Coupons appertaining thereto (which expression shall for this purpose include Coupons falling to be issued on exchange of matured Talons), failing which the amount of any missing unmatured Coupon (or, in the case of payment not being made in full, the same proportion of the amount of such missing unmatured Coupon as the sum so paid bears to the sum due) will be deducted from the sum due for payment. Each amount of principal so deducted will be paid in the manner mentioned above against surrender of the relative missing Coupon at any time before the expiry of five years after the Relevant Date (as defined in Condition 9) in respect of such principal (whether or not such Coupon would otherwise have become void under Condition 10) or, if later, two years from the date on which such Coupon would otherwise have become due, but in no event thereafter.

Upon any Fixed Rate Note in definitive bearer form becoming due and repayable prior to its Maturity Date, all unmatured Talons (if any) appertaining thereto will become void and no further Coupons will be issued in respect thereof.

Upon the date on which any Floating Rate Note, Dual Currency Note, Index Linked Interest Note or Long Maturity Note in definitive bearer form becomes due and repayable, unmatured Coupons and Talons (if any) relating thereto (whether or not attached) shall become void and no payment or, as the case may be, exchange for further Coupons shall be made in respect thereof. A "Long Maturity Note" is a Fixed Note (other than a Fixed Rate Note which on issue had a Talon attached) whose nominal amount on issue is less than the aggregate interest payable thereon, *provided that* such Note shall cease to be a Long Maturity Note on the Fixed Interest Date on which the aggregate amount of interest remaining to be paid after that date is less than the nominal amount of such Note.

If the due date for redemption of any definitive Bearer Note is not an Interest Payment Date, interest (if any) accrued in respect of such Note from (and including) the preceding Interest Payment Date or, as the case may be, the Interest Commencement Date shall be payable only against surrender of the relevant definitive Bearer Note.

(c) Payments in respect of Bearer Global Notes

Payments of principal and interest (if any) in respect of Notes represented by any Global Note in bearer form will (subject as provided below) be made in the manner specified above in relation to definitive Bearer Notes and otherwise in the manner specified in the relevant Global Note against presentation or surrender, as the case may be, of such Global Note at the specified office of any Paying Agent outside the United States. A record of each payment made against presentation or surrender of any Global Note in bearer form, distinguishing between any payment of principal and any payment of interest, will be made on such Global Note by the Paying Agent to which it was presented and such record shall be prima facie evidence that the payment in question has been made.

(d) Payments in respect of Registered Notes

Payments of principal (other than installments of principal prior to the final installment) in respect of each Registered Note (whether or not in global form) will be made against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the Registered Note at the specified office of the Registrar or any of the Paying Agents. Such payments will be made by transfer to the Designated Account (as defined below) of the holder (or the first named of joint holders) of the Registered Note appearing in the register of holders of the Registered Notes maintained by the Registrar (the "Register") at the close of business on the third business day (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar is located) before the relevant due date. Notwithstanding the previous sentence, if (i) a holder does not have a Designated Account or (ii) the principal amount of the Notes held by a holder is less than US$250,000 (or its approximate equivalent in any other Specified Currency), payment will instead be made by a check in the Specified Currency drawn on a Designated Bank (as defined below) and mailed by uninsured mail as soon as reasonably practicable after the relevant due date to the holder (or the first named of joint holders) of the Registered Note appearing in the Registrar at the close of business on the Record Date (as defined below). For these purposes, "Designated Account" means the account (which, in the case of a payment in Japanese Yen to a non-resident of Japan, shall be a non-resident account) maintained by a holder with a Designated Bank and identified as such in the Register and "Designated Bank" means (in the case of payment in a Specified Currency other than euro) a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars or New Zealand dollars, shall be Sydney or Auckland, respectively) and (in the case of a payment in euro) any bank which processes payments in euro.

Payments of interest and payments of installments of principal (other than the final installment) in respect of each Registered Note (whether or not in global form) will be made by a check in the Specified Currency drawn on a Designated Bank and mailed by uninsured mail on the business day in the city where the specified office of the Registrar is located immediately preceding the relevant due date to the holder (or the first named of joint holders) of the Registered Note appearing in the Register (i) where in global form, at the close of the business day (being for the purpose a day on which DTC and/or Euroclear and Clearstream, Luxembourg, as applicable, are open for business) and (ii) where in definitive form, at the close of business on the fifteenth day (whether or not such fifteenth day is a business day) before the relevant due date (the "Record Date") at his address shown in the Register on the Record Date and at his risk. Upon application of the holder to the specified office of the Registrar not less than three business days in the city where the specified office of the Registrar is located before the due date for any payment of interest in respect of a Registered Note, the payment may be made by transfer on the due date in the manner provided in the preceding paragraph. Any such application for transfer shall be deemed to relate to all future payments of interest (other than interest due on redemption) and installments of principal (other than the final installment) in respect of the Registered Notes which become payable to the holder who has made the initial application until such time as the Registrar is notified in writing to the contrary by such holder. Payment of the interest due in respect of each Registered Note on redemption and the final installment of principal will be made in the same manner as payment of the principal amount of such Registered Note.

Holders of Registered Notes will not be entitled to any interest or other payment for any delay in receiving any amount due in respect of any Registered Note as a result of a check posted in accordance with this Condition arriving after the due date for payment or being lost in the post. No commissions or expenses shall be charged to such holders by the Registrar in respect of any payments of principal or interest in respect of the Registered Notes.

All amounts payable to DTC or its nominee as registered holder of a Registered Global Note in respect of Notes denominated in a Specified Currency other than U.S. dollars shall be paid by transfer by the Registrar to an account in the relevant Specified Currency of the Exchange Agent on behalf of DTC or its nominee for conversion into and payment in U.S. dollars in accordance with the provisions of the Agency Agreement.

None of the Issuer, the Guarantor nor any of the Agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

(e) General provisions applicable to payments

The holder of a Global Note shall be the only person entitled to receive payments in respect of Notes represented by such Global Note and the Issuer (and the Guarantor, if applicable) will be discharged by payment to, or to the order of, the holder of such Global Note in respect of each amount so paid. Each of the persons shown in the records of DTC, Euroclear or Clearstream, Luxembourg as the beneficial holder of a particular nominal amount of Notes represented by such Global Note must look solely to DTC, Euroclear or Clearstream, Luxembourg, as the case may be, for his share of each payment so made by the Issuer to, or to the order of, the holder of such Global Note.

Notwithstanding the foregoing provisions of this Condition, if any amount of principal and/or interest in respect of Bearer Notes is payable in U.S. dollars, such U.S. dollar payments of principal and/or interest in respect of such Notes will be made at the specified office of a Paying Agent in the United States if:

(i) the Issuer and the Guarantor have appointed Paying Agents with specified offices outside the United States with the reasonable expectation that such Paying Agents would be able to make payment in U.S. dollars at such specified offices outside the United States of the full amount of principal and interest on the Bearer Notes in the manner provided above when due;

(ii) payment of the full amount of such principal and interest at all such specified offices outside the United States is illegal or effectively precluded by exchange controls or other similar restrictions on the full payment or receipt of principal and interest in U.S. dollars; and

(iii) such payment is then permitted under United States law without involving, in the opinion of the Issuer and the Guarantor, adverse tax consequences to the Issuer or the Guarantor.

(f) Payment Day

If the date for payment of any amount in respect of any Note, Receipt or Coupon is not a Payment Day, the holder thereof shall not be entitled to payment until the next following Payment Day in the relevant place and shall not be entitled to further interest or other payment in respect of such delay. For these purposes, "Payment Day" means any day that (subject to Condition 9) is:

(i) either (1) in relation to any sum payable in a Specified Currency other than euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial center of the country of the relevant Specified Currency (if other than the place of presentation and any Additional Financial Center and which if the Specified Currency is Australian dollars or New Zealand dollars shall be Melbourne and Wellington, respectively) or (2) in relation to any sum payable in euro, a day on which the TARGET 2 System is open; and

(ii) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in:

(A) the relevant place of presentation (in the case of Notes in definitive form); and

(B) the Additional Financial Center(s) specified in the applicable Pricing Supplement.

(g) Interpretation of principal and interest

Any reference in these Terms and Conditions to principal in respect of the Notes shall be deemed to include, as applicable:

(i) any additional amounts which may be payable with respect to principal under Condition 9;

(ii) the Final Redemption Amount of the Notes;

(iii) the Early Redemption Amount of the Notes;

(iv) the Optional Redemption Amount(s) (if any) of the Notes;

(v) in relation to Notes redeemable in installments, the Installment Amounts;

(vi) in relation to Zero Coupon Notes, the Amortized Face Amount (as defined in Condition 8(e)); and

(vii) any premium and any other amounts which may be payable by the Issuer under or in respect of the Notes.

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 9.

8. REDEMPTION AND PURCHASE

(a) Redemption at maturity

Unless previously redeemed or purchased and canceled as specified below, each Note (including each Index Linked Redemption Note and Dual Currency Note) will be redeemed by the Issuer at its Final Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement in the relevant Specified Currency on the Maturity Date.

(b) Redemption for tax reasons

The Notes may be redeemed at the option of the Issuer in whole, but not in part, at any time (if this Note is neither a Floating Rate Note nor an Index Linked Interest Note nor a Dual Currency Interest Note) or on any Interest Payment Date (if this Note is either a Floating Rate Note or an Index Linked Interest Note or a Dual Currency Interest Note), on giving not less than 30 nor more than 60 days' notice to the Principal Paying Agent and, in accordance with Condition 15, the Noteholders (which notice shall be irrevocable), if:

(i) the Issuer or (if the Guarantor is required to make payments under the Guarantee) the Guarantor has or will become obligated to pay additional amounts as provided or referred to in Condition 9 in excess of any additional amounts the Issuer or (if the Guarantor is required to make payments under the Guarantee) the Guarantor would be obligated to pay if payments (including payments of interest) with respect to the Notes or the Guarantee, as applicable, were subject to the applicable tax rate effective on the date the first Tranche of the Notes of the relevant Series are issued as a result of any change in, expiration of or amendment to the laws or regulations of a Tax Jurisdiction (as defined in Condition 9), or any change in the application or official interpretation of such laws or regulations, which change or amendment becomes effective on or after the date on which agreement is reached to issue the first Tranche of the Notes of the relevant Series; and

(ii) such obligation cannot be avoided by the Issuer or the Guarantor, if applicable, taking reasonable measures available to it, *provided that* (1) no such notice of redemption shall be given earlier than 60 days prior to the earliest date on which the Issuer or the Guarantor, if applicable, would be obligated to pay such additional amounts were a payment in respect of the Notes (or the Guarantee, if applicable), then due and (2) at the time of such notice of redemption is given, such obligation to pay such additional amounts remains in effect.

Prior to the publication of any notice of redemption pursuant to this Condition, the Issuer or the Guarantor, as applicable, shall deliver to the Principal Paying Agent (1) a certificate signed by an authorized officer of the Issuer or the Guarantor, as applicable, stating that the Issuer or the Guarantor, as applicable, is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer or the Guarantor, as applicable, so to redeem have occurred and (2) an opinion of independent legal advisers of recognized standing to the effect that the Issuer or the Guarantor, as applicable, has or will become obligated to pay such additional amounts as a result of such change or amendment.

Notes redeemed pursuant to this Condition 8(b) will be redeemed at their Early Redemption Amount referred to in paragraph (e) below together (if appropriate) with interest accrued to (but excluding) the date of redemption.

(c) Redemption at the option of the Issuer (Issuer Call)

If Issuer Call is specified in the applicable Pricing Supplement, the Issuer may, having given:

(i) not less than 15 nor more than 30 days' notice to the Noteholders in accordance with Condition 15; and

(ii) not less than 15 days before the giving of the notice referred to in (i), notice to the Principal Paying Agent and is the case of a redemption of Registered Notes, the Registrar (which notices shall be irrevocable and shall specify the date fixed for redemption),

redeem all or some only of the Notes then outstanding on any Optional Redemption Date and at the Optional Redemption Amount(s) specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the relevant Optional Redemption Date. Any such redemption must be of a nominal amount not less than the Minimum Redemption Amount and not more than the Higher Redemption Amount, in each case as may be specified in the applicable Pricing Supplement. In the case of a partial redemption of Notes, the Notes to be redeemed (the "Redeemed Notes") will be selected individually by lot, in the case of Redeemed Notes represented by definitive Notes, and in accordance with the rules of Euroclear, Clearstream, Luxembourg and/or DTC in the case of Redeemed Notes represented by a Global Note, not more than 30 days prior to the date fixed for redemption (such date of selection being hereinafter called the "Selection Date"). In the case of Redeemed Notes represented by definitive Notes, a list of the serial numbers of such Redeemed Notes will be published in accordance with Condition 15 not less than 15 days prior to the date fixed for redemption. The aggregate nominal amount of Redeemed Notes represented by definitive Notes shall bear the same proportion to the aggregate nominal amount of all Redeemed Notes as the aggregate nominal amount of definitive Notes outstanding bears to the aggregate nominal amount of the Notes outstanding, in each case on the Selection Date, *provided that* such first mentioned nominal amount shall, if necessary, be rounded downwards to the nearest integral multiple of the Specified Denomination, and the aggregate nominal amount of Redeemed Notes represented by a Global Note shall be equal to the balance of the Redeemed Notes. No exchange of the relevant Global Note will be permitted during the period from (and including) the Selection Date to (and including) the date fixed for redemption pursuant to this paragraph (c) and notice to that effect shall be given by the Issuer to the Noteholders in accordance with Condition 15 at least five days prior to the Selection Date.

(d) Change of Control; Redemption of the Notes only at the option of the Noteholders (Investor Put)

(i) Change of Control

Upon the occurrence of a Change of Control (as defined below), each Noteholder will have the right to require the Issuer to redeem all or any part of such Noteholder's Notes at a redemption price equal to 100% of the principal amount thereof plus accrued but unpaid interest, if any, to the date of redemption (the "Change of Control Redemption Price"). Within 30 days following a Change of Control, the Issuer shall cause the Principal Paying Agent to deliver a notice to each holder stating that (i) a Change of Control has occurred and that such holder has the right to require the Issuer to redeem such holder's Notes at the Change of Control Redemption Price; (ii) the redemption date (which shall be no earlier than 30 days nor later than 60 days from the date such notice is delivered); and (iii) the procedures determined by the Issuer, consistent with the Notes and the Agency Agreement, that a Noteholder must follow in order to have its Notes redeemed.

"*Change of Control*" means the central government of Korea ceasing to own and control (directly or indirectly or in combination) at least 51% of the Company's issued and outstanding capital stock.

(ii) Redemption of the Notes only at the option of the Noteholders (Investor Put)

If Investor Put is specified in the applicable Pricing Supplement with respect to any Series of Notes, upon the holder of any Note giving to the Issuer in accordance with Condition 15 not less than 15 nor more than 30 days' notice the Issuer will, upon the expiry of such notice, redeem, subject to, and in accordance with, the terms specified in the applicable Pricing Supplement, in whole (but not in part), such Note on the Optional Redemption Date and at the Optional Redemption Amount together, if appropriate, with interest accrued to (but excluding) the Optional Redemption Date. Registered Notes may be redeemed under this Condition 8(d)(ii) in any multiple of their lowest Specified Denomination.

To exercise the right to require redemption of this Note, the holder of this Note must deliver, at the specified office of any Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) at any time during normal business hours of such Paying Agent or, as the case may be the Registrar falling within the notice period, a duly completed and signed notice of exercise in the form (for the time being current) obtainable from any specified office of any Paying Agent or, as the case may be the Registrar (a "Put Notice") and in which the holder must specify a bank account (or, if payment is required to be made by check, an address) to which payment is to be made under this Condition and, in the case of Registered Notes, the nominal amount thereof to be redeemed and, if less than the full nominal amount of the Registered Notes so surrendered is to be redeemed, an address to which a new Registered Note in respect of the balance of such Registered Notes is to be sent subject to and in accordance with the provisions of Condition 2(b). If this Note is in definitive form, the Put Notice must be accompanied by this Note or evidence satisfactory to the Paying Agent concerned that this Note will, following delivery of the Put Notice, be held to its order or under its control.

Any Put Notice given by a holder of any Note pursuant to this paragraph shall be irrevocable except where prior to the due date of redemption an Event of Default shall have occurred and be continuing in which event such holder, at its option, may elect by notice to the Issuer to withdraw the notice given pursuant to this paragraph and instead to declare such Note forthwith due and payable pursuant to Condition 11.

(e) Early Redemption Amounts

For the purpose of paragraph (b) above and Condition 11, each Note will be redeemed at the Early Redemption Amount calculated as follows:

(i) in the case of a Note with a Final Redemption Amount equal to the Issue Price, at the Final Redemption Amount thereof;

(ii) in the case of a Note (other than a Zero Coupon Note but including an Installment Note) with a Final Redemption Amount which is or may be less or greater than the Issue Price or which is payable in a Specified Currency other than that in which the Notes are denominated, at the amount specified in, or determined in the manner specified in, the applicable Pricing Supplement or, if no such amount or manner is so specified in the applicable Pricing Supplement, at its nominal amount; or

(iii) in the case of a Zero Coupon Note, at an amount (the "Amortized Face Amount") calculated in accordance with the following formula:

Early Redemption Amount = RP × (1+AY)y

where:

"RP" means the Reference Price;

"AY" means the Accrual Yield expressed as a decimal; and

"y" is a fraction the numerator of which is equal to the number of days (calculated on the basis of a 360-day year consisting of 12 months of 30 days each) from (and including) the Issue Date of the first Tranche of the Notes of the relevant Series to (but excluding) the date fixed for redemption or (as the case may be) the date upon which such Note becomes due and repayable and the denominator of which is 360,

or on such other calculation basis as may be specified in the applicable Pricing Supplement.

(f) Installments

Installment Notes will be redeemed in the Installment Amounts and on the Installment Dates. In the case of early redemption, the Early Redemption Amount will be determined pursuant to paragraph (e) above.

(g) Partly Paid Notes

Partly Paid Notes will be redeemed, whether at maturity, early redemption or otherwise, in accordance with the provisions of this Condition and the applicable Pricing Supplement.

(h) Purchases

The Issuer and the Guarantor may at any time purchase Notes by tender (available to all Noteholders alike) or in the open market at any price. If the Issuer or the Guarantor shall acquire any Notes, such acquisition shall not operate as or be deemed for any purpose to be a satisfaction of the indebtedness represented by such Notes unless and until such Notes are delivered to the Principal Paying Agent for cancellation and are canceled and retired by the Principal Paying Agent. Each of the Issuer and the Guarantor will not sell, and will cause its affiliates (as defined in paragraph (a)(1) of Rule 144 of the Securities Act) not to sell, any Notes as to which it or they hold or acquire any beneficial interest; *provided* that affiliates of the Issuer or the Guarantor may sell Notes to the Issuer or the Guarantor or to other such affiliates. Notes purchased or otherwise acquired by the Issuer or the Guarantor, as applicable, may be held, resold or, at its discretion, surrendered to the Principal Paying Agent for cancellation.

(i) Cancellation

All Notes that are redeemed will forthwith be canceled (together with all unmatured Receipts, Coupons and Talons attached thereto or surrendered therewith at the time of redemption). All Notes so canceled and the Notes purchased and canceled pursuant to paragraph (g) above (together with all unmatured Receipts, Coupons and Talons canceled therewith) shall be forwarded to the Principal Paying Agent and cannot be reissued or resold.

(j) Late payment on Zero Coupon Notes

If the amount payable in respect of any Zero Coupon Note upon redemption of such Zero Coupon Note pursuant to paragraph (a), (b), (c) or (d) above or upon its becoming due and repayable as provided in Condition 11 is improperly withheld or refused, the amount due and repayable in respect of such Zero Coupon Note shall be the amount calculated as provided in paragraph (e)(iii) above as though the references therein to the date fixed for the redemption or the date upon which such Zero Coupon Note becomes due and payable were replaced by references to the date which is the earlier of:

(i) the date on which all amounts due in respect of such Zero Coupon Note have been paid; and

(ii) five days after the date on which the full amount of the moneys payable in respect of such Zero Coupon Notes has been received by the Principal Paying Agent or the Registrar and notice to that effect has been given to the Noteholders in accordance with Condition 15.

9. TAXATION

All payments of principal and interest in respect of the Notes, Receipts and Coupons or under the Guarantee (if applicable) by or on behalf of the Issuer or the Guarantor (if applicable) will be made without withholding or deduction for or on account of any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or on behalf of the relevant Tax Jurisdiction unless such withholding or deduction is required by law. In such event, the Issuer (or the Guarantor, if applicable) will pay such additional amounts as shall be necessary in order that the net amounts received by holders of the Notes, Receipts or Coupons after such withholding or deduction will not be less than the respective amounts of principal and interest which would otherwise have been receivable in respect of the Notes, Receipts or Coupons, as the case may be, in the absence of such withholding or deduction; except that no such additional amounts shall be payable with respect to any Note, Receipt or Coupon:

(i) to or on behalf of a holder of such Note, Receipt or Coupon who is subject to such taxes, duties, assessments or governmental charges in respect of such Note by reason of such holder being or having been connected with the relevant Tax Jurisdiction other than merely by holding such Note or receiving principal or interest in respect thereof; or

(ii) to or on behalf of a holder of such Note, Receipt or Coupon who would not be liable for or subject to such deduction or withholding by making a declaration of non-residence or other similar claim for exemption to the relevant tax authority if, after having been requested in writing by the Issuer (or the Guarantor, if applicable) to make such a declaration or claim, such holder fails to do so; or

(iii) to or on behalf of a holder of such Note, Receipt or Coupon who presents a Note (where presentation is required) more than 30 days after the relevant date except to the extent that the holder thereof would have been entitled to such additional amounts on presenting the same for payment on the last day of such 30-day period; for this purpose the "relevant date" means:

(a) the due date for payment thereof; or

(b) if the full amount of the moneys payable on such date has not been received by the Principal Paying Agent or the Registrar, as the case maybe, on or prior to such due date, the date on which, the full amount of such moneys having been so received, notice to that effect is duly given to the Noteholders in accordance with Condition 15; or

(iv) if withholding or deduction is imposed on a payment to or for the benefit of an individual and such payment is required to be made pursuant to European Council Directive 2003/48/EC or any law implementing or complying with, or introduced in order to conform to, such Directive; or

(v) to or on behalf of a holder of such Note, Receipt or Coupon who would have been able to avoid the withholding or deduction by the presentation (where presentation is required) of the relevant Note, Receipt or Coupon to, or otherwise accepting payment from, another paying agent in a Member State of the European Union; or

(vi) with respect to an Issuer that is organized under the laws of Mexico, to or on behalf of a holder of such Note, Receipt or Coupon, in an amount that corresponds to a rate in excess of the withholding tax rate applicable to interest paid by a Mexican tax resident to a non-Mexican tax resident under any securities placed through a bank or a broker-dealer in a country other than Mexico with which Mexico maintains a valid treaty in order to avoid double taxation pursuant to the Mexican Income Tax Law (*Ley del Impuesto Sobre La Renta*), but only to the extent that such holder failed to provide on a timely basis, at the reasonable request of the Issuer or Guarantor (as the case may be), information or documentation concerning such holder's eligibility, if any, for benefits under an income tax treaty to which Mexico is a party that is in effect, that is necessary to determine the appropriate rate of deduction or withholding of Mexican taxes under such treaty; or

(vii) any combination of (i), (ii), (iii), (iv), (v) or (vi) above.

The obligation of the Issuer or the Guarantor, as applicable, to pay additional amounts in respect of taxes, duties, assessments and governmental charges shall not apply to (i) any estate, inheritance, gift, sales, transfer, personal property or any similar tax, assessment or other governmental charge or (ii) any tax, assessment or other governmental charge which is payable otherwise than by deduction or withholding from payments of principal and interest in respect of the Notes, Receipts and Coupons; *provided that*, except as otherwise set forth in these Terms and Conditions and in the Agency Agreement, the Issuer or the Guarantor, as applicable, shall pay all stamp or other similar duties, if any, which may be imposed by the relevant Tax Jurisdiction, the United States or any respective political subdivision thereof or any taxing authority of or in the foregoing, with respect to the Notes or the Agency Agreement or as a consequence of the issuance of the first Tranche of the Notes of the relevant Series.

As used herein: "Tax Jurisdiction" means, (i) with respect to the Company, Korea or any political subdivision or any authority thereof or therein having power to tax or any other jurisdiction or any political subdivision or any authority thereof or therein having power to tax to which the Company becomes subject in respect of payments made by it of principal and interest on the Notes, Receipts or Coupons or under the Guarantee, as the case may be, through such jurisdiction, and (ii) with respect to any Guaranteed Issuer, such Guaranteed Issuer's jurisdiction of incorporation or any political subdivision or any authority thereof or therein having power to tax or any other jurisdiction or any political subdivision or any authority thereof or therein having power to tax to which such Guaranteed Issuer becomes subject in respect of payments made by it of principal and interest on the Notes, Receipts or Coupons through such jurisdiction.

10. PRESCRIPTION

The Notes (whether in bearer form or registered form), Receipts and Coupons and the Guarantee will become void unless presented for payment within a period of five years (in the case of principal) and two years (in the case of interest) after the Relevant Date (as defined in Condition 9) therefor.

There shall not be included in any Coupon sheet issued on exchange of a Talon any Coupon the claim for payment in respect of which would be void pursuant to this Condition or Condition 7(b) or any Talon that would be void pursuant to Condition 7(b).

11. EVENTS OF DEFAULT

The occurrence and continuance of any of the following events will constitute an event of default ("Event of Default"):

(i) default in the payment of any installment of interest upon any of the Notes as and when the same shall become due and payable, and continuance of such default for a period of 30 days;

(ii) default in the payment of all or any part of the principal of any of the Notes as and when the same shall become due and payable, whether at maturity, upon redemption or otherwise;

(iii) breach or failure to observe or perform any other of the covenants or agreements on the part of the Issuer or the Guarantor (if applicable) contained in the Notes of the relevant Series or the Guarantee (if applicable) for a period of 60 days after the date on which written notice specifying such default or breach, stating that such notice is a "Notice of Default" under the Notes of the relevant Series or the Guarantee (if applicable) and demanding that the Issuer or the Guarantor (if applicable) remedy the same, shall have been given to the Issuer or the Guarantor (if applicable), with a copy to the Principal Paying Agent and the Registrar, by the Noteholders of at least 10% in aggregate principal amount of the Notes of the relevant Series at the time outstanding;

(iv) any Debt (as defined below) of the Company in the aggregate outstanding principal amount of US$10,000,000 or more either (a) becoming due and payable prior to the due date for payment thereof by reason of acceleration thereof following default by the Company or (b) not being repaid at, and remaining unpaid after, maturity as extended by the period of grace, if any, applicable thereto, or any guarantee given by the Company in respect of Debt of any other person not being honored when, and remaining dishonored after becoming, due and called; *provided* that, in the case of (a) above, if any such default under any such Debt shall be cured or waived, then the default under the Notes by reason thereof shall be deemed to have been cured and waived;

(v) the entry of a decree or order for relief in respect of the Issuer or the Guarantor by a court or administrative or other governmental agency or body having jurisdiction in the premises in an involuntary case under any applicable bankruptcy, insolvency, reorganization, rehabilitation, compulsory composition or other similar law in effect on the date of issuance of the first Tranche of the Notes or thereafter, or appointing a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or the Guarantor or for any substantial part of its property or ordering the winding up, dissolution or liquidation of its affairs, or shall otherwise adjudicate or find the Issuer or the Guarantor to be bankrupt or insolvent, and continuance of any such decree or order unstayed and in effect for a period of 60 consecutive days; or

(vi) the commencement by the Issuer or the Guarantor of a voluntary case under any applicable bankruptcy, insolvency, reorganization, rehabilitation, compulsory composition or other similar law in effect on the date of issuance of the first Tranche of the Notes or thereafter, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or the Guarantor or for any substantial part of its property, or cease to carry on the whole or substantially the whole of its business, or make any general assignment for the benefit of creditors, or enter into any composition with its creditors, or take corporate action in furtherance of any such action.

If an Event of Default with respect to the Notes occurs and is continuing, the Noteholders of not less than 25% in aggregate principal amount of the Notes then outstanding may declare the principal amount (and premium, if any) of, and all accrued but unpaid interest on, all the Notes to be due and payable immediately, by a notice in writing to the Issuer and the Guarantor (if applicable) at the office of the Principal Paying Agent, and upon such declaration, any such principal amount (and premium, if any) and interest shall become immediately due and payable. Upon such declaration, the Principal Paying Agent shall give notice thereof to the Issuer and the Guarantor (if applicable) and to the Noteholders in writing. If, after any such declaration and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the Issuer or the Guarantor, as applicable, pays or deposits with the Principal Paying Agent all amounts then due with respect to the Notes (other than amounts due solely because of such declaration) and cures all other Events of Default with respect to the Notes, such defaults may be waived and such declaration may be annulled and rescinded by the Noteholders of more than 50% in aggregate principal amount of the Notes then outstanding by written notice thereof to the Issuer and the Guarantor (if applicable) at the office of the Principal Paying Agent.

In this Condition, "*Debt*" means, with respect to any person as of any date of determination, without duplication, (i) all obligations, contingent or otherwise, of such person for borrowed money, (ii) all obligations of such person evidenced by bonds, notes or other similar instruments, (iii) all obligations of such person in respect of letters of credit or other similar instruments, (iv) all obligations of such person to pay the unpaid purchase price of any property or service, (v) all obligations secured by any mortgage, charge, pledge, encumbrance or other security interest (a "Lien") on any property or asset of such person, whether or not such obligations are assumed by such person and (vi) all obligations of others guaranteed by such person to the extent of such guarantees and, for clauses (i) through (vi), which are denominated in a currency other than the currency of Korea and which has a final maturity of one year or more. The amount of Debt of any person as of any date of determination shall be the outstanding balance at such date of all unconditional obligations as described above, the maximum liability of such person for any such contingent obligations at such date and, in the case of clause (v), the lesser of the fair market value (as determined in good faith by the board of directors of such person) at such date of the property or asset of such person subject to a Lien securing the obligations of others and the amount of such obligations secured.

12. REPLACEMENT OF NOTES, RECEIPTS, COUPONS AND TALONS

Should any Note, Receipt, Coupon or Talon be lost, stolen, mutilated, defaced or destroyed, it may be replaced at the specified office of the Principal Paying Agent (in the case of Bearer Notes, Coupons or Talons) or the Registrar (in the case of Registered Notes) upon payment by the claimant of such costs and expenses as may be incurred in connection therewith and on such terms as to evidence and indemnity as the Issuer may reasonably require. Mutilated or defaced Notes, Receipts, Coupons or Talons must be surrendered before replacements will be issued.

13. PAYING AGENTS

The names of the initial Paying Agents and their initial specified offices are set out below.

The Issuer and the Guarantor are entitled to vary or terminate the appointment of any Paying Agent and/or appoint additional or other Paying Agents and/or approve any change in the specified office through which any Paying Agent acts, *provided that*:

(a) there will at all times be a Principal Paying Agent;

(b) so long as the Notes are listed on any stock exchange, there will at all times be a Paying Agent (in the case of Bearer Notes) and a Transfer Agent (in the case of Registered Notes) with a specified office in such place as may be required by the rules and regulations of the relevant stock exchange or any other relevant authority;

(c) so long as any of the Registered Global Notes payable in a Specified Currency other than U.S. dollars are held through DTC or its nominee, there will at all times be an Exchange Agent with a specified office in New York City;

(d) the Issuer and the Guarantor undertake that they will ensure that they maintain a Paying Agent in a Member State of the European Union that is not obliged to withhold or deduct tax pursuant to European Council Directive 2003/48/EC or any law implementing or complying with, or introduced in order to conform to such Directive; and

(e) so long as the Notes are listed on the Singapore Exchange Securities Trading Limited (the "Singapore Stock Exchange") and the rules of the Singapore Stock Exchange so require, if the Notes are issued in definitive form, there will at all times be a Paying Agent in Singapore.

In addition, the Issuer and the Guarantor shall forthwith appoint a Paying Agent having a specified office in New York City in the circumstances described in Condition 7(e). Any variation, termination, appointment or change with respect to any Paying Agent shall only take effect (other than in the case of insolvency, when it shall be of immediate effect) after not less than 30 nor more than 45 days' prior notice thereof shall have been given to the Noteholders in accordance with Condition 15.

In acting under the Agency Agreement, the Paying Agents act solely as agents of the Issuer and do not assume any obligation to, or relationship of agency or trust with, any Noteholders, Receiptholders or Couponholders. The Agency Agreement contains provisions permitting any entity into which any Paying Agent is merged or converted or with which it is consolidated or to which it transfers all or substantially all of its assets to become the successor paying agent.

14. EXCHANGE OF TALONS

On and after the Interest Payment Date on which the final Coupon comprised in any Coupon sheet matures, the Talon (if any) forming part of such Coupon sheet may be surrendered at the specified office of the Principal

Paying Agent or any other Paying Agent in exchange for a further Coupon sheet including (if such further Coupon sheet does not include Coupons to (and including) the final date for the payment of interest due in respect of the Note to which it appertains) a further Talon, subject to the provisions of Condition 10.

15. NOTICES

All notices regarding the Bearer Notes will be deemed to be validly given if published (i) in a leading English language daily newspaper of general circulation in London and Asia by the Issuer or the Guarantor, if applicable. It is expected that such publication will be made in the Financial Times in London and the Asian Wall Street Journal. The Issuer or the Guarantor, as applicable, shall also ensure that notices are duly published in a manner which complies with the rules of any stock exchange or other relevant authority on which the Bearer Notes are for the time being listed or by which they have been admitted to listing. Any such notice will be deemed to have been given on the date of the first publication or, where required to be published in more than one newspaper, on the date of the first publication in all required newspapers.

All notices regarding the Registered Notes will be deemed to be validly given if sent by first class mail or (if posted to an address overseas) by airmail to the holders (or the first named of joint holders) at their respective addresses recorded in the Register and will be deemed to have been given on the fourth day after mailing and, in addition, for so long as any Registered Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules.

Until such time as any definitive Notes are issued, there may, so long as any Global Notes representing the Notes are held in their entirety on behalf of Euroclear, Clearstream, Luxembourg and/or DTC, be substituted for such publication in such newspaper(s) the delivery of the relevant notice to Euroclear, Clearstream, Luxembourg, and/or DTC for communication by them to the Noteholders and, in addition, for so long as any Notes are listed on a stock exchange and the rules of that stock exchange or relevant authority so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules. Any such notice shall be deemed to have been given to the Noteholders one day after the day on which the said notice was given to Euroclear, Clearstream, Luxembourg and/or DTC.

Notices to be given by any Noteholder shall be in writing and given by lodging the same, together (in the case of any Note in definitive form) with the relative Note or Notes, with the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes). Whilst any of the Notes are represented by a Global Note, such notice may be given by any holder of a Note to the Principal Paying Agent or the Registrar through Euroclear, Clearstream, Luxembourg and/or DTC, as the case may be, in such manner as the Principal Paying Agent, the Registrar and Euroclear, Clearstream, Luxembourg and/or DTC, as the case may be, may approve for this purpose.

16. MEETINGS OF NOTEHOLDERS, MODIFICATION AND WAIVER

The Agency Agreement contains provisions for convening meetings of the Noteholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution of a modification of the Notes, the Receipts, the Coupons or any of the provisions of the Agency Agreement. Such a meeting may be convened by the Issuer, the Guarantor or Noteholders holding not less than 10% in nominal amount of the Notes for the time being remaining outstanding. The quorum at any such meeting for passing an Extraordinary Resolution is one or more persons holding or representing not less than 50% in nominal amount of the Notes for the time being outstanding, or at any adjourned meeting one or more persons being or representing Noteholders whatever the nominal amount of the Notes so held or represented, except that at any meeting the business of which includes the modification of certain provisions of the Notes, Receipts or Coupons (including modifying the date of maturity of the Notes or any date for payment of interest thereof, reducing or canceling the amount of principal or the rate of interest payable in respect of the Notes or altering the currency of payment of the Notes, Receipts or Coupons), the quorum shall be one or more persons holding or representing in the aggregate not less than 75% in nominal amount of the Notes for the time being outstanding, or at any adjourned such meeting one or more persons holding or representing in the aggregate a clear majority, in nominal amount of the Notes for the time being outstanding. An Extraordinary Resolution passed at any meeting of the Noteholders shall be binding on all the Noteholders, whether or not they are present at the meeting, and on all Receiptholders and Couponholders.

The Principal Paying Agent, the Issuer and the Guarantor may agree, without the consent of the Noteholders, Receiptholders or Couponholders, to:

(i) any modification (except as mentioned above) of any of the provisions of the Notes, the Receipts, the Coupons, the Conditions, the Agency Agreement or the Guarantee which is not prejudicial to the interests of the Noteholders; or

(ii) any modification of the Notes, the Receipts, the Coupons, the Conditions, the Agency Agreement or the Guarantee which is of a formal, minor or technical nature or is made to correct a manifest error or to comply with mandatory provisions of the law of the jurisdiction in which the Issuer or the Guarantor (if applicable) is incorporated.

Any such modification shall be binding on the Noteholders, the Receiptholders and the Couponholders and any such modification shall be notified to the Noteholders in accordance with Condition 15 as soon as practicable thereafter.

17. FURTHER ISSUES

The Issuer shall be at liberty from time to time without the consent of the Noteholders, the Receiptholders or the Couponholders to create and issue further notes having terms and conditions the same as the Notes or the same in all respects save for the amount and date of the first payment of interest thereon and so that the same shall be consolidated and form a single Series with the outstanding Notes.

18. GOVERNING LAW AND SUBMISSION TO JURISDICTION

(a) Governing law

The Agency Agreement, the Notes, the Guarantee, the Receipts and the Coupons are governed by, and shall be construed in accordance with, the law of the State of New York.

(b) Submission to jurisdiction

To the fullest extent permitted by applicable law, the Issuer and the Guarantor irrevocably submit to the non-exclusive jurisdiction of any federal or state court in the Borough of Manhattan, The City of New York, United States of America, in any suit, action or proceeding brought by any Noteholder, Receiptholder or Couponholder arising out of or based upon the Notes, the Guarantee, the Receipts and/or the Coupons, and irrevocably agrees that all claims in respect of any such suit, action or proceeding may be determined in any such court. The Issuer and the Guarantor irrevocably and to the fullest extent they are permitted to do so under applicable law waive any objection they may have to the laying of venue in any such court or the defense of an inconvenient forum to the maintenance of any such suit or proceeding to the extent permitted by applicable law. The Issuer and the Guarantor hereby appoint the C T Corporation System, whose address as of the date hereof is 111 Eighth Avenue, New York, New York 10011 as their authorized agent (the "Authorized Agent," which expression shall include any replacement authorized agent) upon whom process may be served in any such suit or proceeding set forth herein, it being understood that the designation and appointment of the Authorized Agent as such authorized agent shall become effective immediately without any further action on the part of the Issuer or the Guarantor. The Issuer and the Guarantor agree to take any and all action as may be necessary, including the filing of any and all documents that may be necessary, to maintain such designation and appointment of the authorized agent in full force and effect. If for any reason the appointment of the Authorized Agent shall cease to be in force, the Issuer and the Guarantor shall forthwith appoint a new agent to be the Authorized Agent and shall deliver to the Dealers and the Arranger a copy of the new Authorized Agent's acceptance for that appointment within 30 days. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Issuer or the Guarantor. The parties hereto each hereby waive any right to trial by jury in any action, proceeding or counterclaim arising out of or relating to the Notes, the Guarantee, the Receipts and/or Coupons.

(c) Waiver of immunity

The Issuer and the Guarantor hereby irrevocably and unconditionally waive with respect to Notes, the Guarantee, the Receipts and the Coupons any right to claim sovereign or other immunity from jurisdiction or execution and any similar defense and irrevocably and unconditionally consents to the giving of any relief or the issue of any process, including without limitation, the making, enforcement or execution against any property whatsoever (irrespective of its use or intended use) of any order or judgment made or given in connection with any proceedings.

(d) Other documents

In the Agency Agreement, the Issuer and the Guarantor have submitted to the jurisdiction of the courts of the State of New York and appointed an agent for service of process in terms substantially similar to those set out above.

USE OF PROCEEDS

The net proceeds from each issue of Notes will be applied by the Issuer for its general corporate purposes, including working capital, financing investments in overseas mineral resources exploration, development and production projects, financing capital expenditures and repayment of outstanding borrowings.

EXCHANGE RATES

The table below sets forth, for the periods and dates indicated, information concerning the Market Average Exchange Rate, announced by Seoul Money Brokerage Services, Ltd., between Won and U.S. dollars and rounded to the nearest tenth of one Won. No representation is made that the Won or dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all.

Period	**At End of Period**	**Average Rate[(1)]**	**High**	**Low**
		(Won per U.S.$1.00)		
2012	₩1,071.1	₩1,126.9	₩1,181.8	₩1,071.1
2013	1,055.3	1,095.0	1,159.1	1,051.5
2014	1,099.2	1,053.2	1,118.3	1,008.9
2015	1,172.0	1,131.5	1,203.1	1,068.1
2016	1,208.5	1,160.5	1,240.9	1,093.2
2017 (through April 13)	1,145.2	1,151.3	1,208.5	1,112.5
January	1,157.8	1,185.1	1,208.5	1,157.8
February	1,132.1	1,144.9	1,165.5	1,131.0
March	1,116.1	1,134.8	1,158.2	1,112.5
April (through April 13)	1,145.2	1,130.5	1,145.8	1,113.8

Source: Seoul Money Brokerage Services, Ltd.

Note:

(1) The average rate for each year is calculated as the average of the Market Average Exchange Rates on each business day during the relevant year (or portion thereof). The average rate for a month is calculated as the average of the Market Average Exchange Rates on each business day during the relevant month (or portion thereof).

CAPITALIZATION OF THE COMPANY

The following table sets forth the Company's consolidated short-term debt and capitalization (defined as the sum of long-term debt and owner's equity) as of December 31, 2016 which is derived from the Company's audited consolidated financial statements as of December 31, 2016. The following table should be read in conjunction with "Selected Consolidated Financial Information of the Company" and the Company's audited consolidated financial statements and accompanying notes included elsewhere in this Offering Circular.

	As of December 31, 2016 (in billions of Won and in millions of U.S. dollars[1])	
Short-term debt, including short-term borrowings, current portions of long-term borrowings and current portion of bonds payable, net of discounts	₩ 509.9	US$ 421.9
Long-term debt:		
Long-term borrowings	₩ 616.0	US$ 509.7
Bonds payable, net of discounts	3,777.2	3,125.5
Total long-term debt	4,393.2	3,635.3
Equity:		
Issued Capital	₩ 1,958.3	US$ 1,620.4
Discount on stock issuance	(2.0)	(1.7)
Retained earnings	(2,717.2)	(2,248.4)
Other comprehensive income	164.3	136.0
Non-controlling interests	(244.2)	(202.1)
Total equity	(840.9)	(695.8)
Total capitalization[2]	₩ 3,552.3	US$ 2,939.4

Notes:

(1) For the purpose of this table, the Won amounts have been translated into U.S. dollars at the Market Average Exchange Rate of Won 1,208.5 to US$1.00 on December 31, 2016.

(2) Sum of long-term debt (excluding current portions and discounts) and total equity. On March 31, 2017, the Government made a capital contribution of Won 30 billion to the Company. Other than such capital contribution, there has been no material change in the capitalization of the Company since December 31, 2016.

SELECTED CONSOLIDATED FINANCIAL INFORMATION OF THE COMPANY

The following tables present selected consolidated financial data of the Company. This data should be read in conjunction with the financial statements of the Company and the notes thereto, "The Company — Management's Discussion and Analysis of Financial Condition and Results of Operations" and other historical financial information included elsewhere in, or incorporated by reference into, this Offering Circular. The selected financial data as of and for the years ended December 31, 2014, 2015 and 2016 set forth below have been extracted from the audited annual consolidated financial statements of the Company included in this Offering Circular, which have been audited by Ernst & Young Han Young.

	As of December 31,		
	2014	2015	2016
	(in billions of Won)		
Consolidated Statement of Financial Position Data:			
Total assets	₩5,852.0	₩4,687.5	₩4,365.8
Total liabilities	4,020.2	4,620.6	5,206.6
Total equity	1,831.7	66.9	(840.9)
Paid-in share capital	1,708.2	1,888.3	1,956.2
Total liabilities and equity	5,852.0	4,687.5	4,365.8

	For the Year Ended December 31,		
	2014	2015	2016
	(in billions of Won)		
Consolidated Statements of Comprehensive Income:			
Sales	₩ 274.5	₩ 297.9	₩ 330.5
Cost of sales	(518.5)	(1,420.5)	(607.3)
Gross profit (loss)	(244.0)	(1,122.6)	(276.8)
Selling and administrative expenses	(29.8)	(34.7)	(36.8)
Operating loss	(273.8)	(1,157.3)	(313.6)
Other operating income	5.8	3.3	1.3
Other operating expenses	(0.4)	(99.2)	(101.7)
Other profit (loss), net	(1.1)	(934.4)	(562.6)
Finance income	14.6	13.0	19.7
Finance cost	(12.2)	(10.2)	(7.1)
Profit (loss) before tax	(267.2)	(2,184.9)	(964.0)
Income tax expense (benefit)	(3.7)	(121.3)	23.4
Profit (loss) for the year	₩(263.5)	₩(2,063.6)	₩(987.4)
Other comprehensive income (loss)	109.7	118.6	9.5
Total comprehensive loss for the year	₩(153.8)	₩(1,945.0)	₩(978.0)
Profit (loss) attributable to:			
Equity holders of the parent	(259.5)	(1,792.6)	(806.5)
Non-controlling interests	(4.0)	(271.0)	(180.9)
Profit (loss) for the year	₩(263.5)	₩(2,063.6)	₩(987.4)
Total comprehensive loss attributable to:			
Equity holders of the parent	(150.2)	(1,674.7)	(796.1)
Non-controlling interests	(3.6)	(270.2)	(181.9)
Total comprehensive loss for the year	₩(153.8)	₩(1,945.0)	₩(978.0)
Consolidated Statements Cash Flows:			
Net cash used in operating activities	₩(226.4)	₩ (269.3)	₩(171.7)
Net cash used in investing activities	(272.8)	(291.0)	(418.1)
Net cash provided by financing activities	648.8	542.4	556.6

THE COMPANY

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis is based on the Company's audited consolidated financial statements as of and for the years ended December 31, 2015 and 2016 ("2015 and 2016 Financial Statements") and the Company's audited consolidated financial statements as of and for the years ended December 31, 2014 and 2015 ("2014 and 2015 Financial Statements"). This discussion and analysis of the Company's financial condition and results of operations should be read together with the 2015 and 2016 Financial Statements, the 2014 and 2015 Financial Statements and the related notes included elsewhere in this Offering Circular. The consolidated financial statements of the Company as of and for the years ended December 31, 2014, 2015 and 2016 have been prepared in accordance with Government Accounting Standards.

Overview

The Company is a wholly state-owned enterprise that serves as the execution arm of the Government for mineral resources-related policies of Korea. The Company's revenues are derived principally from its financing segment comprised of revenues from its direct investment and lending activities and related other income. The Company also derives revenues, to a lesser extent, from its others segment, which is comprised of revenues from the Company's support services and related other income. The following is a brief explanation of the segments.

Financing Segment

Direct Investment. Included in this sub-segment are (i) interest income from the shareholder loans extended by the Company, (ii) sales revenues from the sale of mineral products produced from mines in which the Company has a direct investment and (iii) dividend income from the affiliates of the Company. The Company carries out the Government's mineral resources policy objectives by directly investing in overseas mineral resources exploration, development and production projects. As of December 31, 2016, the Company is participating, through various consortiums and joint venture agreements, in exploration, development and production activities in 32 locations in 17 countries. The joint venture projects are typically structured so that following the initial equity investment by the participants in the joint venture project, a shareholder loan is extended to the project by each joint venture partner in proportion to such partner's percentage interest in the project in return for the receipt of interest payments. The main factors affecting the Company's revenues from its direct investment activities are the volume and prices of mineral resources produced and sold by the overseas projects in which the Company invests as well as fluctuations in exchange rates between the Won and the U.S. dollar, in which the mineral resources are typically traded.

Lending. Included in this sub-segment are interest income from loans extended or on-lent by the Company. The Company provides low-cost funding to Korean companies or to those corporations that are a subsidiary of a company that is incorporated in Korea that develop and produce overseas resources directly. The Company receives as "administration fees" the difference between the interest the Company charges other mineral resources developers for the SAER loans that it on-lends and the interest that the Company is required to pay the Government for such loans. Such fees are recorded as interest income on a net basis. The Company also provides low-cost funding to domestic resources developers, researchers and other similar parties. The Company uses capital contributions from the Government to extend financial support to such entities and the lending rate is based on the sum of the sovereign bond rate of Korea and a spread that varies depending on the credit quality of the borrower and various other factors. Interest income on such loans are recognized as revenues as interest accrues. The main factors affecting the Company's revenues from the lending activities are the volume of the loans extended or on-lent by the Company and the interest rate it charges the borrowers.

Other Income. Included in this sub-segment are various income and gains related to the Company's direct investment and lending activities, including (i) reversal of provision for financial assets, (ii) financial foreign exchange trading profit, (iii) gain on equity method, (iv) gain on disposal of investments, (v) commission income and (vi) gain on derivative assets.

Others Segment

Government-Subsidized Support Services. Included in this sub-segment are Government subsidies and grants that the Company received in connection with its Government-subsidized support services activities. The Company provides various support services to Korean companies, including exploration drilling, survey, mine safety training, research, technical and other services, certain of which services are subsidized by the Government and provided at cost by the Company.

Other Income. Included in this sub-segment is the fee income the Company generates from providing certain support services to Korean companies engaged in mineral resources development activities.

Factors Affecting the Company's Results of Operations and Financial Condition

The results of operations and financial condition of the Company have been and will continue to be materially affected by a number of factors and developments, some of which are outside its control, including:

- fluctuations in commodity prices;
- the production volumes of mineral resources by the mining operations in which the Company has an interest;
- fluctuations in exchange rates of the Won against major foreign currencies, primarily the U.S. dollar, the Mexican peso, the Australian dollar and the Canadian dollar;
- the Company's strategy to increase its access to mineral resources overseas; and
- the Government's support for the Company.

Fluctuations in Commodity Prices

The Company's financial performance is sensitive to changes in the market prices of the commodities that it and its affiliates produce, particularly the market prices of bituminous coal, copper and nickel. Historically, the prices of these commodities have been subject to fluctuations and were affected by numerous factors beyond the Company's control, including global and regional supply and demand, supply and market prices of substitute or competing commodities, resource nationalism, global economic trends, exchange rate and interest rate fluctuations, expectations of inflation, speculative activities, weather and natural disasters, political and other events in major mineral producing and consuming nations and production costs in major producing regions.

The following table presents the average prices of bituminous coal, copper and nickel for the periods indicated. These prices represent select quoted prices from the relevant sources as indicated. These prices will differ from the revenues recognized by the Company from the sale of the commodities due to differences in quoted periods, quality of products, delivery terms and the range of quoted prices that are used for contracting sales in different markets.

	For the Year Ended December 31,				
	2012	2013	2014	2015	2016
			(in U.S. dollars)		
Bituminous coal (per ton)(1)	US$ 96.19	US$ 85.07	US$ 70.75	US$ 57.56	US$ 87.30
Copper ore (per ton)(2)	7,949.71	7,322.00	6,862.00	5,493.00	5,666.00
Nickel (per ton)(3)	17,526.05	15,003.50	16,867.13	11,799.00	11,013.00

Notes:

(1) Prices for FOB Newcastle 6,300kcal/kg, which reflect prices of thermal coal with energy-producing caloric value of 6,300 kilocalories per kilogram and delivered from Newcastle, Australia, as published by Platts, a division of The McGraw-Hill Companies.

(2) Cash prices, as quoted on the London Metal Exchange.

(3) Cash prices, as quoted on the London Metal Exchange.

Production Volumes of Mineral Resources

The Company's production volumes of mineral resources depend primarily on the level of the proven and probable reserves in the mines in which it has an interest, as well as other factors such as political and military events in countries where the Company's producing mines are located and the level of technical and logistical difficulties faced during the pre-mining and mining process. The level of proven and probable reserves is affected by such factors as:

- the extent to which the Company acquires interests in producing reserves or acquires other companies that own producing reserves;
- the rate at which explorations lead to successful discoveries and the speed at which successful exploration and development move to production;
- the speed at which the Company and its consortium or joint venture partners deplete the reserves through production; and
- the expiration and extension of the terms of the concessions under which the Company and its consortium or joint venture partners produce mineral resources.

Fluctuations in Exchange Rates of Major Foreign Currencies

The Company's consolidated financial statements are prepared from the local currency denominated financial results, assets and liabilities of the Company and its subsidiaries around the world, which are then translated into Won. A substantial proportion of the Company's consolidated financial results, assets and liabilities is accounted for in currencies other than the Won. Accordingly, the Company's consolidated financial results and assets and liabilities may be materially affected by changes in the exchange rates of the Won against major foreign currencies, primarily the U.S. dollar, the Mexican peso, the Australian dollar and the Canadian dollar. In 2014, a significant portion of the Company's sales revenues was derived from the Company's direct investment activities overseas. To the extent that the Company incurs costs in one currency and makes sales in another, its profit margins may be affected by changes in the exchange rates between the two currencies.

The Company strives to mitigate the adverse impact of exchange rate fluctuations by hedging its exposure through currency futures contracts and cross currency swaps. Although the impact of exchange rate fluctuations has in the past been partially mitigated by such strategies, the Company's results of operations have historically been affected by exchange rate fluctuations. In the past, appreciation of the Won against the major foreign currencies generally has had a net negative impact on the Company's results of operations.

The Company's Investments in Overseas Mineral Resources Projects

The Company has made direct investments in overseas mineral resources exploration, development and production projects in recent years, including the following:

- investments in the amount of Won 153.2 billion, Won 83.0 billion and Won 315.0 billion in 2014, 2015 and 2016, respectively, in the Boleo copper-cobalt-zinc mining project in Baja Peninsula in Mexico, in which the Company holds a 74% equity interest. As of December 31, 2016, the Company's aggregate investment amount in the project was Won 1,530.6 billion. The Company expects to make additional capital contributions of Won 88.2 billion in 2017, which include amounts already contributed by the Company year to date. The Company had initially acquired a 10% equity interest in MMB, the local subsidiary entity of the Boleo project, in June 2008 as a member of a consortium of Korean equity investors. The Korean consortium was initially a minority stakeholder with a 30% equity interest in the project, with the remaining 70% owned by Carmrova Resources (previously named Baja Mining Corporation). Due to significant delays and cost overruns while it was operated by the previous operator, Boleo has since undergone financial and operational restructuring. In order to fund project costs, the Korean consortium injected additional capital contributions, as a result of which the Company acquired an additional 21% ownership interest in MMB and became the operator of the project. In 2013 and 2014, the Company made additional capital contributions to MMB in exchange for increased equity ownership, raising the Company's total interest in MMB to 74%. The Boleo plant commenced initial production of copper in January 2015, zinc in February 2016 and cobalt in April 2016;

- investments in the amount of Won 102.7 billion, Won 139.8 billion and Won 191.6 billion in 2014, 2015 and 2016, respectively, in the Ambatovy nickel mining project in Madagascar, in which the Company holds a 22.5% equity interest. As of December 31, 2016, the Company's aggregate investment amount in the project was Won 1,773.8 billion. The Company expects to make additional capital contributions of Won 297.7 billion in 2017, which include amounts already contributed by the Company year to date. The Ambatovy plant commenced commercial production of nickel in January 2014 and is expected to reach full production capacity in 2018; and

- investments in the amount of Won 75.6 billion, Won 61.4 billion and Won 94.6 billion in 2014, 2015 and 2016, respectively, in the Cobre Panama copper and molybdenum development project in Panama, in which the Company holds a 10.0% equity interest. As of December 31, 2016, the Company's aggregate investment amount in the project was Won 496.6 billion. The Company expects to make additional capital contributions of Won 83.5 billion in 2017, which include amounts already contributed by the Company year to date. The Cobre Panama project is expected to commence initial production in 2018.

The Company funded these acquisitions and capital investments through debt financing, cash on hand and capital contributions by the Government. Exploration and development of mineral resources are capital intensive activities. The Company relies on loans, internally generated funds and capital contributions from the Government to fund such activities. The Company invested approximately Won 351.4 billion, Won 308.7 billion and Won 605.2 billion in overseas mineral resources exploration, development and production projects in 2014, 2015 and 2016, respectively, and the Company currently expects to invest Won 472.2 billion in 2017. The Company's total outstanding borrowings and bonds (exclusive of SAER borrowings) were Won 3,613.9 billion, Won 4,216.7 billion and Won 4,903.2 billion as of December 31, 2014, 2015 and 2016, respectively. The implementation by the Company of its strategy to increase its access to mineral resources may lead to increased levels of debt and debt servicing costs in the future.

Government Support and Regulation

The Company is wholly owned by the Government. The Government provides financial support for the Company, in the form of capital contributions and loans, including SAER loans, used mainly for the Company's direct investment, lending, strategic stockpiling and support operations.

While receiving support from the Government, the Company is also heavily regulated by a variety of laws and government bodies, including the Ministry of Trade, Industry and Energy and the Ministry of Strategy and Finance. The Government, among other things, approves the Company's annual budget, guides the Company's mid- and long-term financial management plans and appoints most of the Company's management, including its president.

Through its control of the Company, the Government has historically influenced, and is likely to continue to influence, the Company's strategy and operations. From time to time, the Company is required to take actions in furtherance of public policy considerations and the Government's broader objectives for the mining industry, which may not necessarily be in the Company's best commercial interests. See "Risk Factors — Risks relating to the Company — The Company is subject to the control of the Government, and, as a public entity that implements the Government's mineral resources policy, its activities are heavily regulated," and "The Company — Business — Relationship with the Government."

Critical Accounting Policies

The preparation of the Company's financial statements requires the Company's management to select and apply significant accounting policies and to make estimates and judgments that affect the Company's reported financial condition and results of operations. Notwithstanding the presentation of its significant accounting policies in notes 2 and 3 of the 2015 and 2016 Financial Statements included elsewhere in this Offering Circular, the Company believes that the following are some of its most critical accounting policies in presenting its financial statements in accordance with government Accounting Standards.

Allowance for Doubtful Accounts

The Company establishes an allowance for doubtful accounts, which is available to absorb probable losses that have been incurred in the Company's loans portfolio as of the date of the statement of financial position. If the Company believes that additions or changes to the allowance for doubtful accounts are required, the Company records provisions for possible loan losses, which are treated as charges against current income. Loan exposures that the Company deems to be uncollectible, including actual loan losses, net of recoveries of previously written-off amounts, are charged directly against allowance for doubtful accounts.

The Company's allowance for doubtful accounts represents its management's best estimate of losses incurred in its loans portfolio as of the date of the statement of financial position. The Company's management is required to exercise judgment in making assumptions and estimates when calculating the allowance for doubtful accounts on both individually and collectively assessed loans. The Company assesses at each reporting date whether there is objective evidence that a loan is impaired. If there is objective evidence that an impairment loss 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, which is discounted using the initial effective interest rate. The carrying amount of the asset is reduced through the use of an allowance for doubtful accounts.

The Company first assesses whether objective evidence of impairment exists for individual loans that are significant. If the Company determines that no objective evidence of impairment exists for an individually assessed loan, the Company includes the loan in a group of loans with similar credit risk characteristics and collectively assesses them for impairment. When an individual loan is impaired, the amount of loss is measured as the difference between the carrying amount and the present value of estimated future cash flows (including estimated future cash flows from the collateral). In collective assessments, the amount of loss is statistically evaluated using the Company's historical loss data.

The present value of estimated future cash flows is measured using the loan's initial effective interest rate. If the loan has a floating interest rate, the Company uses the current effective interest rate for the measurement. Future cash flows from collateral are estimated at net cash flow from disposal of collateral (deducting transaction cost). For the purpose of a collective assessment of impairment, loans are grouped on the basis of the Company's internal credit rating system that considers credit risk characteristics such as asset type, industry, geographical location, collateral type, past-due status and other relevant factors. Future cash flows of the loans collectively assessed are estimated on the basis of historical loss experience for loans with similar credit risk characteristics. Historical loss experience is adjusted on the basis of current observable data to reflect the effects of current conditions on which the historical loss experience is based and to remove the effects of conditions in the historical period that no longer exists. Estimates of changes in future cash flows reflect, and are consistent with, changes in related observable data from year to year. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience. The actual amount of the future cash flows and their timing may differ from the estimates used by the Company's management and consequently may cause actual losses to differ from the reported allowances.

The Company believes that making accounting estimates related to allowance for doubtful accounts are a critical accounting policy because: (1) they are highly susceptible to change from period to period, as they require the Company to make assumptions about future default rates and losses relating to its loan portfolio; and (2) any significant difference between its estimated losses on loans (as reflected in its allowance for doubtful accounts) and actual losses on loans and receivables could require the Company to take additional provisions for possible loan losses that, if significant, could have a material impact on its profit. The Company's assumptions about estimated losses require significant judgment because actual losses have fluctuated in the past and are expected to continue to do so, based on a variety of factors.

Revenue Recognition

Interest income on loans and investments is accrued on a time basis and recognized as revenue using the effective interest method. The effective interest method is a method of calculating the amortized cost of a financial asset and of allocating the interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset or, when appropriate, a shorter period to the net carrying amount of the financial asset. The Company's equity in earnings on equity method investments is classified as revenue and is measured in accordance with Statements of Korean Accounting Standards No. 15 "Investments in Associates," which prescribes the standards on accounting treatment and disclosure of investments in associates. Revenues from other services are recognized to the extent that it is probable that the economic benefits will flow to the Company and the revenue can be reliably measured.

Valuation of Financial Assets and Liabilities

The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial asset or liability is not active, a valuation technique is used. The majority of valuation techniques employ only observable market data and, as such, the reliability of the fair value measurement is high. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques, including using recent arm's length market transactions, reference to the current fair value of another instrument that is substantially identical, or the discounted cash flow method or option pricing models. Valuation techniques that rely to a greater extent on unobservable inputs require a higher level of management judgment to calculate a fair value than those based wholly on observable inputs.

The Company believes that the accounting estimates related to the determination of the fair value of financial assets and liabilities are a critical accounting policy because: (1) they may be highly susceptible to change from period to period based on factors beyond the Company's control; and (2) any significant difference between the Company's estimate of the fair value of these financial instruments on any particular date and either their estimated fair value on a different date or the actual proceeds that the Company receives upon sale of these financial instruments could result in valuation losses or losses on disposal which may have a material impact on its profit. The Company's assumptions about the fair value of financial assets and liabilities it holds require significant judgment because actual valuations have fluctuated in the past and are expected to continue to do so, based on a variety of factors.

The Company evaluates financial assets not carried at fair value through profit or loss at each reporting date to determine whether there is objective evidence that it is impaired. A financial asset not carried at fair value through profit or loss is assessed at each reporting date to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. For an investment in an equity security, a significant or prolonged decline in its fair value below its cost is objective evidence of impairment. If financial assets have objective evidence that they are impaired, the Company measures and recognizes impairment losses as follows:

Financial Assets Measured at Amortized Cost

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of its estimated future cash flows discounted at the asset's original effective interest rate. If it is not practicable to obtain the instrument's estimated future cash flows, impairment losses would be measured by using prices from any observable current market transactions. The Company can recognize impairment losses directly or establish a provision to cover impairment losses. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the previously recognized impairment loss is reversed either directly or by adjusting an allowance account.

Financial Assets Carried at Cost

If there is objective evidence that an impairment loss has occurred on an unquoted equity instrument that is not carried at fair value because its fair value cannot be reliably measured, or on a derivative asset that is linked to and must be settled by delivery of such an unquoted equity instrument, the amount of the impairment loss is measured as the difference between the carrying amount of the financial asset and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment losses are not reversed.

Available-for-sale Financial Assets

When a decline in the fair value of an available-for-sale financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognized. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as available-for-sale is not to be reversed through profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale 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.

Foreign Currencies

Foreign Operations

The Company's reporting currency is the Won. However, the functional currency for each of the Company's foreign operations is its local currency. The Company translates the financial statements of its foreign operations using the following methods:

Assets and Liabilities. The assets and liabilities of the Company's foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated into Won from the local currency at the exchange rate as of the end of each reporting date. The income and expenses of the Company's foreign operations are translated into Won at the exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Goodwill. Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Therefore, they are expressed in the functional currency of the foreign operation and translated at the closing rate.

Disposal of Foreign Operation. When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

Gain or Loss in Foreign Exchange. Foreign exchange gains or losses arising from a monetary item receivable from or payable to a foreign operation, the settlement of which is neither planned nor likely to occur in the foreseeable future and which in substance is considered to form part of the net investment in the foreign operation, are recognized in other comprehensive income in the translation reserve.

Foreign Currency Transactions

A transaction in foreign currency by the Company or any of its subsidiaries is translated into the functional currency of the relevant entity at the exchange rate at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are re-translated into the functional currency using the exchange rate at the reporting date. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are re-translated into the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences resulting from re-translation are recognized in profit or loss, except for those differences resulting from re-translation of available-for-sale equity instruments, a financial liability designated as a hedge of the net investment in a foreign operation or qualifying cash flow hedges, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

Deferred Tax Assets

Income tax expense for the year comprises of current (including additional income taxes for the prior year and refund of prior year's income taxes) and deferred taxes. Deferred income tax is recognized, using the asset-liability method, on temporary differences arising between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. A deferred tax liability is recognized for all taxable temporary differences. A deferred tax asset is recognized for all deductible temporary differences only to the extent that it is probable that future taxable profit will be available against which they can be utilized. However, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit or loss nor taxable income.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and the Company reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized. The recognition of deferred tax assets relies on an assessment of the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and ongoing tax planning strategies. This assessment requires significant management judgment and assumptions. In determining the amount of deferred tax assets, the Company uses forecasted operating results, which are based on historical financial performance, approved business plans, including a review of the eligible carry-forward periods, available tax planning opportunities and other relevant considerations. Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

As of December 31, 2016, the Company recorded Won 103.3 billion in deferred tax assets and no deferred tax liabilities. The Company believes that the estimates related to its recognition and measurement of deferred tax assets are a "critical accounting policy" because: (1) they may be highly susceptible to change from period to period based on the Company's assumptions regarding its future profitability; and (2) any significant difference between the Company's estimates of future profits on any particular date and estimates of such future profits on a different date could result in an income tax expense or benefit which may have a material impact on its profit from period to period. The Company's assumptions about its future profitability require significant judgment and are inherently subjective.

Accounting for Derivative Financial Instruments

The Company records rights and obligations arising from derivative instruments as assets and liabilities and states them at fair value. Gains and losses resulting from changes in the fair value of derivative instruments are reported as profit or loss or, when the derivative instruments are determined by the Company as qualifying for hedging purposes, other comprehensive income. The Company designates derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge). In determining whether a derivative instrument is for hedging purposes, the Company makes judgments on the extent its assets or liabilities are subject to interest rate or foreign currency risk, as well as estimates on expected future cash flows associated with an asset, liability or forecasted transaction. While the Company believes that its estimates and judgments are reasonable, different assumptions regarding such estimates, and different judgments, could produce different results.

On initial designation of the hedge, the Company formally documents the relationship between the hedging instruments and hedged items, including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship. The Company makes an assessment, both at the inception of the hedge relationship as well as on a quarterly basis, whether the hedging instruments are expected to be highly effective in offsetting the changes in the fair value or cash flows of the respective hedged items during the period for which the hedge is designated, and whether the actual results of each hedge are within a range of 80% to 125%. For a cash flow hedge of a forecasted transaction, the transaction should be highly probable to occur and should present an exposure to variations in cash flows that could ultimately affect reported profit.

Fair Value Hedge

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from re-measuring the hedging instrument at fair value for a derivative hedging instrument and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the consolidated statement of comprehensive income. The Company discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

Cash Flow Hedge

When a derivative is designated to hedge the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in the hedging reserve in equity. However, any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is reclassified to profit or loss in the periods during which the forecasted transaction occurs. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

Impairment of Non-financial Assets

The carrying amounts of the Company's non-financial assets, other than assets arising from employee benefits, inventories, deferred tax assets and non-current assets held for sale, are reviewed at the end of each reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Company estimates the recoverable amount of an individual asset. If it is impossible to measure the individual recoverable amount of an asset, then the Company estimates the recoverable amount of cash generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU. An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

The Company makes a number of significant assumptions and estimates in the application of the discounted cash flow model to forecast net cash flows, including business prospects and market conditions. Further impairment charges may be required if triggering events occur, such as adverse market conditions, suggesting deterioration in an asset's recoverability or fair value. Assessment of the timing of when such declines become other than temporary or the amount of such impairment is a matter of significant judgment. Results in actual transactions could differ from those estimates used to evaluate the impairment of such non-financial assets.

Useful Lives of Property, Plant and Equipment

The Company's property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives. In determining the useful lives of its assets, the Company takes into account its historical experience with similar assets, anticipated technological changes that the Company considers relevant, and other factors that may be inherently subjective. The estimated useful lives of the Company's buildings are between 20 to 40 years, structures are 20 years, and machinery, equipment, vehicles and others are between 5 to 10 years. While the Company believes that its estimates of the useful lives of its assets are reasonable, different assumptions regarding such estimates could produce different results, which could have a material impact on the Company's non-current assets level, cost of sales and depreciation expenses. The Company reviews its depreciation methods, useful lives and residual values at the end of each reporting date and makes adjustments, if appropriate.

Recent Accounting Changes and Pronouncements

The preparation of the Company's financial statements is also affected by accounting changes and pronouncements made by the Korea Accounting Standards Board as well as the announcements made by the Ministry of Trade, Industry and Energy from time to time. See note 2 of the 2015 and 2016 Financial Statements included elsewhere in this Offering Circular.

Principal Income Statement Items

Sales

The Company derives its sales revenues principally from the interest income it generates from the loans that the Company extends or on-lends and the income it derives from its investments in overseas mines. The Company also derives revenues from the sale of minerals and provision of Government-subsidized technical and other support services to Korean mining companies. For an overview of sales revenues derived from each segment, see "— Overview" above.

Cost of Sales and Gross Profit

The Company's cost of sales consists primarily of:

- share of loss in associates and joint ventures;
- interest expenses and other financing expenses and fees incurred to finance the Company's direct investment and lending operations;
- other expenses, including loss related to derivatives, loss on transaction of financial exchange and loss on valuation of equity method investments;
- salaries and benefits, including payroll, welfare and retirement allowance, of personnel directly involved in the Company's core business operations, such as direct investment, lending, stockpiling and support services operations; and
- depreciation and amortization of property, plant, equipment and intangible assets used in the Company's core business operations, such as direct investment, lending, stockpiling and support services operations.

The Company's gross profit consists of its sales less cost of sales and reflects the direct profit made from its sales-generating activities.

Selling and Administrative Expenses

The Company incurs various operating costs in addition to its cost of sales. The Company's administrative expenses consist primarily of the following:

- salaries and benefits, including payroll, pension benefits and employee welfare benefits, for its administrative and other personnel not directly involved in the Company's core business operations;
- payment of fees and commission, including fees paid to the auditors;
- amortization of intangible assets; and
- taxes and dues.

Operating Income (Loss)

Operating income (loss) is the Company's gross profit (loss) less selling and administrative expenses. The Company views operating income and operating margin as key measures of its performance.

Other Income and Expenses

The Company's other income consists primarily of reversal of provision for financial assets, compensation and reparations revenue and others, including registration tax refunds and return of bid security. The Company's other expenses consist primarily of other bad debt expenses, donation and others, including loss on prior period error corrections.

Other Profit (Loss), Net

The Company's other profit (loss), net consists primarily of loss on impairment of tangible and intangible assets and other losses.

Finance Income and Cost

Finance income comprises principally interest income on working capital, often held as bank deposits, as well as gain on foreign currency translation and gain on foreign exchange. Finance cost comprises principally interest expense incurred to finance the Company's operations, other than interest expense included as cost of sales, as well as loss on foreign currency translation and loss on foreign exchange.

Income Tax Expense (Benefit)

The Company's income tax expense (benefit) for the period consists of current and deferred tax.

Profit (Loss) for the Year

Profit (loss) for the year is profit (loss) before income taxes less income tax expense.

Other Comprehensive Income (Loss)

Certain unrealized gains and losses of the Company, including gains and losses on valuation of available-for-sale financial assets, gains and losses arising from equity method investments and gains and losses resulting from translating the financial statements of the Company's overseas subsidiaries, are recorded as accumulated other comprehensive income (loss) under other equity on the Company's consolidated statements of financial position. Such items are reclassified into profit or loss when certain conditions are met, which are described above under "— Critical Accounting Policies" and in note 2 of the 2015 and 2016 Financial Statements included elsewhere in this Offering Circular.

Total Comprehensive Income (Loss) for the Year

Total Comprehensive income (loss) for the year is profit (loss) for the year less other comprehensive income (loss).

Results of Operations

2015 Compared to 2016

The following table presents selected income statement data and changes therein for 2015 and 2016.

	For the Year Ended December 31,		Changes 2015 versus 2016	
	2015	2016	Amount	%(1)
	(in billions of Won, except percentages)			
Sales	₩ 297.9	₩ 330.5	₩ 32.6	10.9%
Cost of sales	(1,420.5)	(607.3)	813.3	(57.3)
Gross profit (loss)	(1,122.6)	(276.8)	845.8	(75.3)
Selling and administrative expenses	(34.7)	(36.8)	(2.1)	6.1
Operating loss	(1,157.3)	(313.6)	843.7	(72.9)
Other operating income	3.3	1.3	(2.0)	(60.0)
Other operating expenses	(99.2)	(101.7)	(2.5)	2.5
Other profit (loss), net	(934.4)	(562.6)	371.8	(39.8)
Finance income	13.0	19.7	6.8	52.3
Finance cost	(10.2)	(7.1)	3.0	(29.8)
Profit (loss) before taxes	(2,184.9)	(964.0)	1,220.9	(55.9)
Income tax expense (benefit)	(121.3)	23.4	144.7	N/A
Profit (loss) for the year	₩(2,063.6)	₩(987.4)	1,076.2	(52.2)
Other comprehensive income (loss)	118.6	9.5	(109.1)	(92.0)
Total comprehensive loss	₩(1,945.0)	₩(978.0)	967.0	(49.7)
Profit (loss) for the year	₩(2,063.6)	₩(987.4)	1,076.2	(52.2)
Profit (loss) attributable to equity holders of the parent	(1,792.6)	(806.5)	986.0	(55.0)
Non-controlling interests	(271.0)	(180.9)	90.1	(33.3)
Total comprehensive loss for the year	₩(1,945.0)	₩(978.0)	967.0	(49.7)
Total comprehensive loss for the year attributable to equity holders of the Company	(1,674.7)	(796.1)	878.7	(52.5)
Non-controlling interests	(270.2)	(181.9)	88.4	(32.7)

Note:

(1) N/A = Not applicable.

Sales

The following table presents a breakdown of the Company's sales by segment and changes therein for 2015 and 2016.

	For the Year Ended December 31,		Changes 2015 versus 2016	
	2015	2016	Amount	%
	(in billions of Won, except percentages)			
Financing:				
Direct investment[1]	₩127.1	₩136.3	₩ 9.2	7.3%
Lending	22.4	19.3	(3.1)	(13.8)
Other income[2]	122.1	153.0	30.9	25.3
Subtotal	271.6	308.6	37.1	13.7
Others:				
Government-subsidized support services	23.7	20.0	(3.6)	(15.3)
Other income[3]	2.7	1.8	(0.9)	(33.3)
Subtotal	26.4	21.8	(4.5)	(17.2)
Total sales	₩297.9	₩330.5	32.6	10.9

Notes:

(1) Includes sales revenues from the sale of minerals and interest income and dividend income from certain associates.

(2) Includes currency trading profit, gain on equity method, gain on disposal of investments, commission income and gain on derivative assets and reversal of provision for financial assets.

(3) Includes fee income from domestic development and support services activities.

The Company's sales increased by 10.9%, or Won 32.6 billion, from Won 297.9 billion in 2015 to Won 330.5 billion in 2016 primarily due to an increase in revenue from the financing segment which was partially offset by a decrease in revenue from the others segment.

Financing Segment. The Company's revenues from the financing segment increased by 13.7%, or Won 37.1 billion, from Won 271.6 billion in 2015 to Won 308.6 billion in 2016, due to increases in other income and direct investment, which were offset in part by a decrease in interest income from the Company's lending activities. Specifically:

- Other income increased by 25.3%, or Won 30.9 billion, from Won 122.1 billion in 2015 to Won 153.0 billion in 2016, due primarily to an increase in gain on derivative assets by Won 28.4 billion largely from currency forwards in 2016 compared to 2015.

- Revenues from direct investment increased by 7.3%, or Won 9.2 billion, from Won 127.1 billion to Won 136.3 billion, due to an increase in sales revenues from the sale of minerals, particularly from the Ambatovy project and projects based in Australia, by Won 14.1 billion, which was partially offset by a decrease in interest income from certain associates by Won 4.9 billion, in 2016 compared to 2015.

- Revenues from lending decreased by 13.8%, or Won 3.1 billion, from Won 22.4 billion to Won 19.3 billion, due primarily to a decrease in interest income from loans extended to Korean companies investing in overseas projects, attributable mainly to a decrease in the volume of such loans in 2016 compared to 2015.

Others Segment. The Company's revenues from the others segment decreased by 17.2%, or Won 4.5 billion, from Won 26.4 billion in 2015 to Won 21.8 billion in 2016 primarily due to a decrease in government-subsidized support services by 15.3%, or Won 3.6 billion, from Won 23.7 billion to Won 20.0 billion.

Cost of Sales

The Company's cost of sales decreased by 57.3%, or Won 813.3 billion, from Won 1,420.5 billion in 2015 to Won 607.3 billion in 2016 primarily due to decreases in share of loss in associates and joint ventures, impairment of investments in subsidiaries and impairment loss on financial assets. Specifically:

- Share of loss in associates and joint ventures decreased by 71.4%, or Won 651.7 billion, from Won 912.8 billion in 2015 to Won 261.1 billion in 2016 as the Company's share of net loss recorded by the Ambatovy project, and to a lesser extent, the Capstone project, was significantly lower in 2016 compared to 2015, as the decrease in prices of nickel and copper, respectively, was relatively less in 2016 compared to 2015.

- Impairment of investments in subsidiaries decreased by 96.9%, or Won 91.9 billion, from Won 94.9 billion in 2015 to Won 2.9 billion in 2016 primarily due to decreases in impairment losses from KCMC (Acquisition Co.) and Capstone in 2016 compared to 2015.

- Impairment loss on financial assets decreased by 94.0%, or Won 46.8 billion, from Won 49.7 billion in 2015 to Won 3.0 billion in 2016 primarily due to the impairment loss from available-for-sale financial assets in SEDEX Minerals Limited of Won 26.1 billion in 2015 compared to no such impairment loss in 2016.

Gross Loss

The Company's gross loss decreased by 75.3%, or Won 845.8 billion, from Won 1,122.6 billion in 2015 to Won 276.8 billion in 2016 primarily due to the decrease in cost of sales in 2016 as described above.

Selling and Administrative Expenses

The following table presents a breakdown of the Company's selling and administrative expenses and changes therein for 2015 and 2016.

	For the Year Ended December 31,		Changes 2015 versus 2016	
	2015	2016	Amount	%
	(in billions of Won, except percentages)			
Payroll	₩ 9.4	₩13.0	₩ 3.5	37.4%
Pension benefits	0.9	1.4	0.5	52.0
Employee welfare benefits	1.4	1.6	0.2	12.8
Insurance	0.0	3.8	3.8	20,761.6
Depreciation	1.4	2.6	1.2	89.1
Amortization of intangible assets	2.7	1.9	(0.8)	(29.9)
Fees and commission	11.1	5.8	(5.4)	(48.1)
Taxes and dues	1.4	3.9	2.5	175.7
Research and development	0.6	0.2	(0.3)	(59.6)
Others	5.7	2.6	(3.1)	(54.7)
Total selling and administrative expenses	₩34.7	₩36.8	2.1	6.1

The Company's selling and administrative expenses increased by 6.1%, or Won 2.1 billion, from Won 34.7 billion in 2015 to Won 36.8 billion in 2016 primarily due to increases in insurance and payroll, which were partially offset by a decrease in fees and commission. Insurance increased significantly, by Won 3.8 billion, from Won 0.02 billion in 2015 to Won 3.8 billion in 2016 primarily due to the cost of insuring MMB's processing plant, which came into operation in 2016. Payroll increased by 37.4%, or Won 3.5 billion, from Won 9.4 billion in 2015 to Won 13.0 billion in 2016 primarily due to the early implementation of the Company's annual performance and salary system in 2016, which resulted in the general increase in salaries. Fees and commission decreased by 48.1%, or Won 5.4 billion, from Won 11.1 billion in 2015 to Won 5.8 billion in 2016 primarily due to the lower usage of third party professionals and consultants resulting from the Company's efforts to increase self-sufficiency.

The Company's selling and administrative expenses as a percentage of total sales decreased from 11.6% in 2015 to 11.1% in 2016.

Operating Loss

The following table presents a breakdown of the Company's operating loss by segment and changes therein for 2015 and 2016.

	For the Year Ended December 31,		Changes 2015 versus 2016	
	2015	2016	Amount	%
	(in billions of Won, except percentages)			
Financing	₩(1,102.2)	₩(255.5)	₩846.7	(76.8)%
Others	(55.1)	(58.1)	(3.0)	5.5
Total operating loss	₩(1,157.3)	₩(313.6)	843.7	(72.9)

Primarily due to the factors described above, the Company's operating loss decreased by 72.9%, or Won 843.7 billion, from Won 1,157.3 billion in 2015 to Won 313.6 billion in 2016. The Company recorded an operating loss margin, which represents the ratio of operating loss to total sales, of 388.4% in 2015 and 94.9% in 2016. The decrease in the amount of the operating loss in 2015 compared to 2016 reflected the following:

- Operating loss from the financing segment decreased by 76.8%, or Won 846.7 billion, from Won 1,102.2 billion in 2015 to Won 255.5 billion in 2016 primarily due to decreases in losses arising from share of loss in associates and joint ventures and impairment of investments in joint ventures as described above.

- Operating loss from the others segment increased by 5.5%, or Won 3.0 billion, from Won 55.1 billion in 2015 to Won 58.1 billion in 2016.

Other Operating Income

The Company's other operating income decreased by 60.0%, or Won 2.0 billion, from Won 3.3 billion in 2015 to Won 1.3 billion in 2016 primarily due to a gain on exemption of liabilities of Won 1.8 billion in 2015 resulting from a one-time exemption provided by the Ministry of Trade, Industry and Energy in 2015.

Other Operating Expenses

The Company's other operating expenses increased by 2.5%, or Won 2.5 billion, from Won 99.2 billion in 2015 to Won 101.7 billion in 2016 primarily due to an increase in other bad debt expenses, which was mostly offset by a decrease in other provisions. Other bad debt expenses increased significantly, by Won 49.3 billion, from Won 0.6 billion in 2015 to Won 49.9 billion in 2016 primarily resulting from the recognition of value added taxes on general goods paid by MMB that have not been refunded by the Mexican tax authorities in the amount of Won 41.8 billion as bad debt in 2016. Other provisions decreased by 47.6%, or Won 46.4 billion, from Won 97.5 billion in 2015 to Won 51.1 billion in 2016 primarily due to the repayment of a portion of the partner loans provided by the Company to Sherritt in connection with the Ambatovy project in 2016.

Other Loss, Net

The Company's net other loss decreased by 39.8%, or Won 371.8 billion, from Won 934.4 billion in 2015 to Won 562.6 billion in 2016 primarily due to a decrease in loss on impairment of tangible assets the Company recognized in 2016 on Boleo's tangible assets.

Finance Income, Net

The following table presents a breakdown of the Company's net finance income and changes therein for 2015 and 2016.

	For the Year Ended December 31,		Changes 2015 versus 2016	
	2015	2016	Amount	%[(1)]
	(in billions of Won, except percentages)			
Interest income	₩ 3.3	₩ 4.5	₩ 1.3	38.5%
Interest expense	(5.6)	—	5.6	N/A
Gain (loss) on foreign currency translation, net	(4.2)	3.4	7.6	N/A
Gain on foreign currency transactions, net	9.3	4.6	(4.7)	(50.3)
Total finance income, net	₩ 2.8	₩12.6	9.8	354.0

Note:

(1) N/A = Not applicable

The Company's net finance income increased by 354.0%, or Won 9.8 billion, from Won 2.8 billion in 2015 to Won 12.6 billion in 2016 primarily due to a change from a net loss on foreign currency translation in 2015 to a net gain on foreign translation in 2016 and a decrease in interest expense, which were partially offset by a decrease in net gain on foreign currency transactions. The Company recorded a net loss on foreign currency translation of Won 4.2 billion in 2015 compared to a net gain on foreign currency translation of Won 3.4 billion in 2016 due to depreciation during 2015 in the average value of the Won against the U.S. dollar, in which a significant amount of the Company's debt is denominated. The Company recorded interest expense of Won 5.6 billion in 2015 compared to no interest expenses in 2016 as it did not issue any commercial paper in 2016. Net gain on foreign currency transactions decreased by 50.3%, or Won 4.7 billion, from Won 9.3 billion in 2015 to Won 4.6 billion in 2016 as a result of a narrower range of fluctuations in foreign currency exchange rates, in particular with respect to the U.S. dollar against the Won, in 2016 compared to 2015.

Loss Before Tax

Primarily due to the factors discussed above, the Company's loss before tax decreased by 55.9%, or Won 1,220.9 billion, from Won 2,184.9 billion in 2015 to Won 964.0 billion in 2016.

Income Tax Expense (Benefit)

The Company is subject to Korean corporate income taxes, including local income surtax, at the aggregate statutory rate of 11.0% on taxable income up to Won 200 million, 22.0% on taxable income from Won 200 million up to Won 20 billion and 24.2% on taxable income in excess of Won 20 billion, as well as corporate income and other taxes in the jurisdictions in which it operates, including through its subsidiaries.

The Company recorded an income tax benefit of Won 121.3 billion in 2015 compared to income tax expense of Won 23.5 billion in 2016 primarily due to the decrease in loss before taxes, the effect of which was partially offset by recognition of previously unrecognized tax loss, tax credit and temporary difference prior to previous period. The Company had net deferred tax assets of Won 103.3 billion outstanding as of December 31, 2016.

Loss for the Year

Primarily due to the factors described above, the Company's loss for the year decreased by 52.2%, or Won 1,076.2 billion, from Won 2,063.6 billion 2015 to Won 987.4 billion in 2016. The Company's loss attributable to equity holders of the parent of decreased from Won 1,792.6 billion in 2015 to Won 806.5 billion in 2016. The Company's loss attributable to non-controlling interests decreased from Won 271.0 billion in 2015 to Won 180.9 billion in 2016.

Other Comprehensive Income

The Company's other comprehensive income decreased by 92.0%, or Won 109.1 billion, from Won 118.6 billion in 2015 to Won 9.5 billion in 2016 primarily due to a decrease in changes in equity in equity method investments from Won 71.9 billion in 2015 to Won 20.2 billion in 2016.

Total Comprehensive Income (Loss) for the Year

Primarily due to the factors described above, the Company's total comprehensive loss decreased from Won 1,945.0 billion in 2015 to Won 978.0 billion in 2016. The Company's total comprehensive loss attributable to equity holders of the parent decreased from Won 1,674.7 billion in 2015 to Won 796.1 billion in 2016, while the Company's total comprehensive loss attributable to non-controlling interests decreased from Won 270.2 billion in 2015 to Won 181.9 billion in 2016.

2014 Compared to 2015

The following table presents selected income statement data and changes therein for 2014 and 2015.

	For the Year Ended December 31,		Changes 2014 versus 2015	
	2014	2015	Amount	%
	(in billions of Won, except percentages)			
Sales	₩ 274.5	₩ 297.9	₩ 23.4	8.5%
Cost of sales	(518.5)	(1,420.5)	(902.0)	174.0
Gross profit (loss)	(244.0)	(1,122.6)	(878.6)	360.0
Selling and administrative expenses	(29.8)	(34.7)	(4.9)	16.3
Operating loss	(273.8)	(1,157.3)	(883.4)	322.6
Other operating income	5.8	3.3	(2.6)	(43.9)
Other operating expenses	(0.4)	(99.2)	(98.9)	26,385.5
Other profit (loss), net	(1.1)	(934.4)	(933.3)	82,567.6
Finance income	14.6	13.0	(1.6)	(11.0)
Finance cost	(12.2)	(10.2)	2.0	(16.7)
Profit (loss) before taxes	(267.2)	(2,184.9)	(1.917.7)	717.7
Income tax expense (benefit)	(3.7)	(121.3)	(117.6)	3,168.1
Profit (loss) for the year	₩(263.5)	₩(2,063.6)	(1,800.1)	683.2
Other comprehensive income (loss)	109.7	118.6	8.9	8.2
Total comprehensive loss	₩(153.8)	₩(1,945.0)	(1,791.2)	1,164.5
Profit (loss) for the year	₩(263.5)	₩(2,063.6)	(1,800.1)	683.2
Profit (loss) attributable to equity holders of the parent	(259.5)	(1,792.6)	(1,533.1)	590.8
Non-controlling interests	(4.0)	(271.0)	(267.0)	6,697.6
Total comprehensive loss for the year	₩(153.8)	₩(1,945.0)	(1,791.2)	1,164.5
Total comprehensive loss for the year attributable to equity holders of the Company	(150.2)	(1,674.7)	(1,524.6)	1,015.2
Non-controlling interests	(3.6)	(270.2)	(266.6)	7,315.1

Sales

The following table presents a breakdown of the Company's sales by segment and changes therein for 2014 and 2015.

	For the Year Ended December 31,		Changes 2014 versus 2015	
	2014	2015	Amount	%
	(in billions of Won, except percentages)			
Financing:				
Direct investment[1]	₩115.8	₩127.1	₩11.3	9.8%
Lending	28.7	22.4	(6.3)	(22.0)
Other income[2]	99.6	122.1	22.5	22.6
Subtotal	244.1	271.6	27.5	11.3
Others:				
Government-subsidized support services	25.7	23.7	(2.0)	(7.8)
Other income[3]	4.7	2.7	(2.0)	(43.0)
Subtotal	30.4	26.4	(4.0)	(13.3)
Total sales	₩274.5	₩297.9	23.4	8.5

Notes:

(1) Includes sales revenues from the sale of minerals and interest income and dividend income from certain associates.

(2) Includes financial currency trading profit, gain on equity method, gain on disposal of investments, commission income and gain on derivative assets and reversal of provision for financial assets.

(3) Includes fee income from domestic development and support services activities.

The Company's sales increased by 8.5%, or Won 23.4 billion, from Won 274.5 billion in 2014 to Won 297.9 billion in 2015 primarily due to an increase in revenue from the financing segment which was partially offset by a decrease in revenue from the others segment.

Financing Segment. The Company's revenues from the financing segment increased by 11.3%, or Won 27.5 billion, from Won 244.1 billion in 2014 to Won 271.6 billion in 2015, due to increases in other income and direct investments, which were offset in part by a decrease in interest income from the Company's lending activities. Specifically:

- Other income increased by 22.6%, or Won 22.5 billion, from Won 99.6 billion in 2014 to Won 122.1 billion in 2015, due primarily to an increase in financial currency trading profit of Won 25.7 billion as a result of the depreciation of the Won against the U.S. dollar in 2015 compared to 2014.

- Revenues from direct investment increased by 9.8%, or Won 11.3 billion, from Won 115.8 billion to Won 127.1 billion, due primarily to an increase in interest income from certain associates by Won 16.1 billion, which was partially offset by a decrease in sales revenues from the sale of minerals, particularly from the Ambatovy project following a drop in nickel prices, by Won 11.2 billion in 2015 compared to 2014.

- Revenues from lending decreased by 22.0%, or Won 6.3 billion, from Won 28.7 billion to Won 22.4 billion, due primarily to a decrease in interest income from loans extended to Korean companies investing in overseas projects, attributable mainly to a decrease in the volume of such loans in 2015 compared to 2014.

Others Segment. The Company's revenues from the others segment decreased by 13.3%, or Won 4.0 billion, from Won 30.4 billion in 2014 to Won 26.4 billion in 2015 primarily due to decreases in government-subsidized support services and fee income from domestic development and support services activities.

Cost of Sales

The Company's cost of sales increased by 174.0%, or Won 902.0 billion, from Won 518.5 billion in 2014 to Won 1,420.5 billion in 2015 primarily due to increases in share of loss in associates and joint ventures and impairment of investments in joint ventures. Specifically:

- Share of loss in associates and joint ventures increased by 553.8%, or Won 773.2 billion, from Won 139.6 billion in 2014 to Won 912.8 billion in 2015 primarily due to an increase in net loss recorded by the Ambatovy project, and to a lesser extent, the Capstone project, attributable mainly to the decrease in prices of nickel and copper in 2015 compared to 2014.

- Impairment of investments in joint ventures increased significantly from Won 2.2 billion in 2014 to Won 94.9 billion in 2015 primarily due to impairment loss in 2015 from KCMC (Acquisition Co.) and Capstone, as the fair value of the securities fell below the acquisition cost.

- Loss on transaction of financial exchange increased by 71.2%, or Won 64.3 billion, from Won 90.3 billion in 2014 to Won 154.6 billion in 2015 primarily due to the exchange rate fluctuations during the period in which loans and other financial transactions are made, particularly fluctuations in the dollar-Won exchange rate.

Gross Loss

The Company's gross loss increased by 360.0%, or Won 878,6 billion, from Won 244.0 billion in 2014 to Won 1,122.6 billion in 2015 primarily due to the increase in cost of sales in 2015 as described above.

Selling and Administrative Expenses

The following table presents a breakdown of the Company's selling and administrative expenses and changes therein for 2014 and 2015.

	For the Year Ended December 31,		Changes 2014 versus 2015	
	2014	2015	Amount	%
	(in billions of Won, except percentages)			
Payroll	₩ 7.7	₩ 9.4	₩ 1.7	22.2%
Pension benefits	0.5	0.9	0.4	79.7
Employee welfare benefits	1.3	1.4	0.1	11.1
Depreciation	3.1	1.4	(1.7)	(54.6)
Amortization of intangible assets	2.4	2.7	0.3	10.6
Fees and commission	7.8	11.1	3.3	42.9
Taxes and dues	0.4	1.4	1.0	292.7
Research and development	1.5	0.6	(0.9)	(61.5)
Others	5.2	5.7	0.5	10.2
Total selling and administrative expenses	₩29.8	₩34.7	4.9	16.3

The Company's selling and administrative expenses increased by 16.3%, or Won 4.9 billion, from Won 29.8 billion in 2014 to Won 34.7 billion in 2015 primarily due to an increase in fees and commission and payroll, which were partially offset by a decrease in depreciation expenses. Fees and commission increased by 42.9%, or Won 3.3 billion, from Won 7.8 billion in 2014 to Won 11.1 billion in 2015 primarily due to an increase in professional and consulting fees paid. Payroll increased by 22.2%, or Won 1.7 billion, from Won 7.7 billion in 2014 to Won 9.4 billion in 2015 primarily due to an increase in the number of employees. Depreciation expenses decreased by 54.6%, or Won 1.7 billion, from Won 3.1 billion in 2014 to Won 1.4 billion in 2015 primarily due to the commencement of initial production of the Boleo project in 2015 resulting in the recognition of certain equipment assets as construction in progress assets.

The Company's selling and administrative expenses as a percentage of total sales increased from 10.9% in 2014 to 11.6% in 2015.

Operating Loss

The following table presents a breakdown of the Company's operating loss by segment and changes therein for 2014 and 2015.

	For the Year Ended December 31,		Changes 2014 versus 2015	
	2014	2015	Amount	%
	(in billions of Won, except percentages)			
Financing	₩(219.9)	₩(1,102.2)	₩(882.3)	401.2%
Others	(53.9)	(55.1)	(1.2)	2.2
Total operating loss	₩(273.8)	₩(1,157.3)	(883.4)	322.6

Primarily due to the factors described above, the Company's operating loss increased from Won 273.8 billion in 2014 to Won 1,157.3 billion in 2015. The Company recorded an operating loss margin, which represents the ratio of operating loss to total sales, of 99.7% in 2014 and 388.4% in 2015. The increase in the amount of the operating loss in 2014 compared to 2015 reflected the following:

- Operating loss from the financing segment increased by 401.2%, or Won 882.3 billion, from Won 219.9 billion in 2014 to Won 1,102.1 billion in 2015 primarily due to increases in share of loss in associates and joint ventures and impairment of investments in joint ventures as described above.

- Operating loss from the others segment increased slightly by 2.2%, or Won 1.2 billion, from Won 53.9 billion in 2014 to Won 55.1 billion in 2015.

Other Operating Income

The Company's other operating income decreased by 43.9%, or Won 2.6 billion, from Won 5.8 billion in 2014 to Won 3.3 billion in 2015 primarily due to the recognition of the recovery of fines and penalties previously assessed by Mexican tax authorities following a settlement between MMB and the local tax authorities in 2014, compared to no such recognition in 2015.

Other Operating Expenses

The Company's other operating expenses increased significantly from Won 0.4 billion in 2014 to Won 99.2 billion in 2015 primarily due to a Won 97.5 billion in other provisions in 2015 resulting from the partner loans provided by the Company to Sherritt in connection with the Ambatovy project in 2015 compared to no such loans being provided in 2014.

Other Loss, Net

The Company's net other loss increased significantly from Won 1.1 billion in 2014 to Won 934.4 billion in 2015 primarily due to loss on impairment of intangible assets the Company recognized in 2015 on Boleo's tangible assets due to decreases in prices of copper, cobalt and zinc, compared to no such loss in 2014.

Finance Income, Net

The following table presents a breakdown of the Company's net finance income and changes therein for 2014 and 2015.

	For the Year Ended December 31,		Changes 2014 versus 2015	
	2014	2015	Amount	%
	(in billions of Won, except percentages)			
Interest income	₩ 6.0	₩ 3.3	₩(2.7)	(45.7)%
Interest expense	(10.2)	(5.6)	4.6	(45.2)
Loss on foreign currency translation, net	(1.8)	(4.2)	(2.4)	132.9
Gain on foreign currency transactions, net	8.4	9.3	1.0	11.5
Total finance income, net	₩ 2.3	₩ 2.8	0.4	19.0

The Company's net finance income increased by 19.0%, or Won 0.4 billion, from Won 2.3 billion in 2014 to Won 2.8 billion in 2015 primarily due to a decrease in interest expense, which was partially offset by a decrease in interest income and increase in net loss on foreign currency translation. Interest expense decreased by 45.2%, or Won 4.6 billion, from Won 10.2 billion in 2014 to Won 5.6 billion in 2015 due primarily to a decrease in the amount of commercial paper issued by the Company in 2015 compared to 2014. Interest income decreased by 45.7%, or Won 2.7 billion, from Won 6.0 billion in 2014 to Won 3.3 billion in 2015 as a result of the lower market interest rate environment in 2015 compared to 2014 and the decrease in the average volume of interest-bearing assets from 2014 to 2015. Loss on foreign currency translation increased by 133.8%, or Won 2.4 billion, from Won 1.8 billion in 2014 to Won 4.2 billion in 2015 as a result of a depreciation during 2015 in the average value of the Won against the U.S. dollar, in which a significant amount of the Company's debt is denominated.

Loss Before Tax

Primarily due to the factors discussed above, the Company's loss before tax increased by 717.7%, or Won 1,917.7 billion, from Won 267.2 billion in 2014 to Won 2,184.9 billion in 2015.

Income Tax Benefit

The Company's income tax benefit increased significantly from Won 3.7 billion in 2014 to Won 121.3 billion in 2015 primarily due to the tax treatment of the recognition of loss on impairment of tangible assets in 2015 resulting in an increase in benefit relating to origination and reversal of temporary difference. The Company had net deferred tax assets of Won 122.1 billion outstanding as of December 31, 2015.

Loss for the Year

Primarily due to the factors described above, the Company's loss for the year increased by 683.2%, or Won 1,800.1 billion, from Won 263.5 billion in 2014 to Won 2,063.6 billion in 2015. The Company's loss attributable to equity holders of the parent of increased from Won 259.5 billion in 2014 to Won 1,792.6 billion in 2015. The Company's loss attributable to non-controlling interests increased from Won 4.0 billion in 2014 to Won 271.0 billion in 2015.

Other Comprehensive Income

The Company's other comprehensive income increased from Won 109.7 billion in 2014 to Won 118.6 billion in 2015 primarily due to an increase in net gain on valuation of available-for-sale financial assets from Won 3.0 billion in 2014 to Won 14.9 billion in 2015.

Total Comprehensive Loss for the Year

Primarily due to the factors described above, the Company's total comprehensive loss increased from Won 153.8 billion in 2014 to Won 1,945.0 billion in 2015. The Company's total comprehensive loss attributable to equity holders of the parent increased from Won 150.2 billion in 2014 to Won 1,674.7 billion in 2015. The Company's total comprehensive loss attributable to non-controlling interests increased from Won 3.6 billion in 2014 to Won 270.2 billion in 2015.

Financial Condition, Liquidity and Capital Resources

Liquidity and Capital Resources

The Company's principal sources of liquidity have historically been:

- capital contributions and loans from the Government;
- proceeds from short-term and long-term borrowings as well as issuances of bonds; and
- cash generated by its operations.

The Company's principal cash requirements or uses have historically been:

- investments in overseas exploration, development and production projects;
- extension of loans to Korean companies investing in the domestic mining industry and overseas mining projects;
- acquisition of mineral resources for its strategic stockpiling program;
- interest and principal payments on the Company's short-term and long-term borrowings and bonds; and
- cash required for its operations, including payroll and welfare costs, research and development expenses and fees and commissions.

The Company's paid-in share capital is allowed to be invested solely by the Government in accordance with the KORES Act to fulfill its overall policy mandate given by the Government. The Company's issued capital increased from Won 1,710.2 billion as of December 31, 2014 to Won 1,890.4 billion as of December 31, 2015 and Won 1,956.2 billion as of December 31, 2016 due to Government contributions to capital. However, the Company's total equity decreased from Won 1,831.7 billion as of December 31, 2014 to Won 66.9 billion as of December 31, 2015 and negative Won 840.9 billion as of December 31, 2016 due primarily to the Company's losses for the year in 2015 and 2016. See "Risk Factors — Risks relating to the Company — Fluctuations in commodity prices have adversely affected and may in the future adversely affect the Company's business, results of operations and financial condition."

The Company had a working capital (which is equal to total current assets minus total current liabilities) deficit of Won 1,022.5 billion as of December 31, 2014, Won 556.7 billion as of December 31, 2015 and Won 45.8 billion as of December 31, 2016. The Company manages its liquidity risk to maintain adequate net working capital by constantly managing projected cash flows. The Company also aims to mitigate liquidity risk by contracting with financial institutions with respect to bank overdrafts and banking facility agreements for efficient management of funds. The Company currently anticipates that expected future capital contributions and loans from the Government, the cash flow that the Company generates from its operations, together with its existing cash and cash equivalents and current and future financing arrangements, and proceeds from planned sales of minority interests in some of its overseas investments and non-core assets will be likely to be sufficient to satisfy its currently anticipated operating cash requirements, capital expenditure needs and debt service requirements for the foreseeable future. However, the Company may need to raise additional capital sooner than it expects in order to respond to future changes in Government policies and respond to changes in the global mineral industry and the global commodity market conditions. Furthermore, the Company's debt-to-equity ratio may deteriorate significantly from its current levels, particularly if additional costs and expenses relating to decreases in mineral prices are required to be recognized.

The Company strives to maintain a sound capital structure, and it monitors capital on the basis of its debt-to-equity ratio, which is calculated as total liabilities divided by total equity. The following table sets forth the Company's debt-to-equity ratios as of the dates indicated:

	As of December 31,		
	2014	2015	2016
	(in billions of Won, except percentages)		
Total liabilities	₩4,020.2	₩4,620.6	₩5,206.6
Total equity	1,831.7	66.9	(840.9)
Debt-to-equity ratio	219.5%	6,906.7%	N/A

Note:
(1) N/A = Not applicable

Cash Flows

The following table sets forth a summary of the Company's consolidated cash flows for the periods indicated.

	For the Year Ended December 31,		
	2014	2015	2016
	(in billions of Won)		
Net cash used in operating activities	₩(226.4)	₩(269.3)	₩(171.7)
Net cash used in investing activities	(272.8)	(290.0)	(418.1)
Net cash from financing activities	648.8	542.4	556.6
Net increase (decrease) in cash and cash equivalents	129.1	(10.2)	(33.8)
Cash and cash equivalents at beginning of year	26.5	158.0	147.9
Cash and cash equivalents at end of year	155.6	147.9	114.1

Net Cash Used in Operating Activities

The Company recorded net cash used in operating activities of Won 226.4 billion in 2014, Won 269.3 billion in 2015 and Won 171.7 billion in 2016.

- In 2014, the Company recorded loss for the year of Won 263.5 billion and recognized net cash used in operating activities of Won 226.4 billion. Addition of expenses not involving cash outflows included net loss on valuation of equity method investment of Won 134.9 billion, net interest expense of Won 29.7 billion and depreciation of property, plant and equipment of Won 20.4 billion, while deduction of items not involving cash flows included income tax benefit of Won 3.7 billion. Net cash used in changes in operating assets and liabilities related to operating activities was Won 124.9 billion due primarily to an increase in inventories of Won 79.6 billion reflecting an increase in acquisition of mineral resources for the Company's strategic stockpiling program as well as an increase in inventories of MMB, which became a consolidated subsidiary in July 2013, and an increase in other non-current assets of Won 55.6 billion reflecting an increase in non-current assets of MMB. The Company also used cash of Won 73.7 billion for payment of net interest.

- In 2015, the Company recorded loss for the year of Won 2,063.6 billion and recognized net cash used in operating activities of Won 269.3 billion. Addition of expenses not involving cash outflows included loss on impairment of tangible assets of Won 941.5 billion and net loss on valuation of equity method investments of Won 912.4 billion, while deduction of items not involving cash flows included income tax benefit of Won 121.3 billion. Net cash used in changes in operating assets and liabilities related to operating activities was Won 142.3 billion due primarily to other payables of Won 48.3 billion reflecting a decrease in other payables of MMB, and other non-current assets of Won 34.1 billion reflecting an increase in mineral reserves. The Company also used cash of Won 84.9 billion for payment of net interest.

- In 2016, the Company recorded loss for the year of Won 987.4 billion and recognized net cash used in operating activities of Won 171.7 billion. Addition of expenses not involving cash outflows included loss on impairment of tangible assets of Won 561.2 billion and net loss on valuation of equity method investments of Won 260.4 billion, while deduction of items not involving cash flows included net interest income of Won 23.8 billion. Net cash used in changes in operating assets and liabilities related to operating activities was Won 62.5 billion due primarily to other receivables of Won 49.3 billion reflecting an increase in value added taxes on general goods paid by MMB that have not been refunded by the Mexican tax authorities in 2016. The Company also used cash of Won 91.2 billion for payment of net interest.

Net Cash Used in Investing Activities

The Company recorded net cash used in investing activities of Won 272.8 billion in 2014, Won 290.9 billion in 2015 and Won 418.1 billion in 2016.

- In 2014, the Company's net cash used in investing activities of Won 272.8 billion consisted primarily of cash outflows for net increase in long-term loans of Won 246.0 billion and increase in construction in progress of Won 218.9 billion, which were offset in part by cash inflow from net decrease in short-term financial instruments of Won 149.7 billion and net decrease in short-term loans of Won 126.0 billion. The net increase in long-term loans reflects an increase in long-term loans of the Company, mainly for the repayment of borrowings of KORES Canada Corp., the Company's consolidated subsidiary in Canada, as well as an increase in bonds of MMB, whereas the increase in construction in progress reflects the development of the Boleo project, which completed the construction of its main copper plant in December 2014. In 2014, the Company shifted its business strategy from expanding its operations abroad by investing and acquiring new projects to focusing on normalizing its existing large-scale investments and strengthening its productions, development and exploration capabilities. The net decrease in short-term financial instruments reflects an increase in cash used in overseas investments, whereas the net decrease in short-term loans reflects repayment of short-term loans.

- In 2015, the Company's net cash used in investing activities of Won 290.9 billion consisted primarily of cash outflows for net increase in long-term loans of Won 279.7 billion and increase in construction in progress of Won 168.1 billion, which were offset in part by cash inflow from net decrease in short-term loans of Won 154.6 billion. The net increase in long-term loans reflects the Company's investment loans to the Ambatovy, Boleo, and Cobre Panama projects, whereas the increase in construction in progress reflects the continued development of the Boleo project. The net decrease in short-term loans reflects repayment of short-term loans.

- In 2016, the Company's net cash used in investing activities of Won 418.1 billion consisted primarily of cash outflows for net increase in long-term loans of Won 402.1 billion and increase in construction in progress of Won 76.5 billion, which were offset in part by cash inflow from net decrease in short-term loans of 152.5 billion. The net increase in long-term loans reflects the Company's investment loans to the Ambatovy, Boleo, and Cobre Panama projects, whereas the increase in construction in progress reflects the continued development of the Boleo project. The net decrease in short-term loans reflects repayment of short-term loans.

Net Cash from Financing Activities

The Company recorded net cash from financing activities of Won 648.8 billion in 2014, Won 542.4 billion in 2015 and Won 556.6 billion in 2016.

- In 2014, the Company's net cash from financing activities of Won 648.8 billion consisted primarily of net increase in bonds of Won 758.7 billion and proceeds from the issuance of share capital of Won 224.4 billion, which were offset in part by a net decrease in long-term borrowings of Won 211.6 billion and a net decrease in short-term borrowings of Won 118.8 billion. The net increase in bonds was primarily to refinance the debt incurred in connection with the Company's overseas exploration, development and production activities, mainly the Boleo project.

- In 2015, the Company's net cash from financing activities of Won 542.4 billion consisted primarily of net increase in bonds of Won 433.8 billion and proceeds from the issuance of share capital of Won 180.2 billion, which were offset in part by a net decrease in long-term borrowings of Won 59.6 billion. The net increase in bonds was primarily to refinance the debt incurred in connection with the Company's overseas exploration, development and production activities, mainly the Ambatovy, Boleo and Cobre Panama projects.

- In 2016, the Company's net cash from financing activities of Won 556.6 billion consisted primarily of net increase in bonds of Won 573.0 billion and proceeds from the issuance of share capital of Won 67.9 billion, which were offset in part by a net decrease in long-term borrowings of Won 39.4 billion and a net decrease in short-term borrowings of Won 31.5 billion. The net increase in bonds was primarily to refinance the Company's overseas exploration, development and production activities, mainly the Ambatovy, Boleo and Cobre Panama projects.

Short-Term and Long-Term Borrowings

Total short-term borrowings were Won 370.0 billion as of December 31, 2014, Won 385.0 billion as of December 31, 2015 and Won 353.5 billion as of December 31, 2016. In addition, Won 156.4 billion of the Company's long-term borrowings and bonds as of December 31, 2016 are scheduled to become due on or prior to December 31, 2017.

Total long-term borrowings, excluding current portion and net of SAER borrowings, were Won 224.2 billion as of December 31, 2014, Won 645.9 billion as of December 31, 2015 and Won 616.0 billion as of December 31, 2016. Total bonds, net of discounts and excluding current portion, were Won 2,009.0 billion as of December 31, 2014, Won 2,585.1 billion as of December 31, 2015 and Won 3,777.2 billion as of December 31, 2016.

Maturities of the Company's long-term borrowings and bonds that were outstanding as of December 31, 2016 are as follows.

For the Year Ended December 31,	Long-Term Borrowings and Bonds in Won	Long-Term Borrowings and Bonds in Foreign Currency	Total
	(in billions of Won)		
2017	₩ —	₩ 93.1	₩ 93.1
2018	100.0	699.7	799.7
2019	110.0	761.2	871.2
2020	140.0	620.5	760.5
Thereafter	1,056.0	984.6	2,040.6
Total	₩1,406.0	₩3,159.1	₩4,565.1

The Company believes that it has various options to meet its financing needs, including short-term and long-term borrowing facilities and issuances of bonds. However, the ability of the Company to continue to obtain debt financing at a reasonable cost will depend on several factors, some of which may be outside its control, including general economic conditions, the liquidity of the Korean and international capital markets and the Government's policies regarding Won and foreign currency borrowings. These policies can affect the Company's ability to borrow and gain access to domestic and foreign capital markets or restrict the use of proceeds of any financing, and can require the Company to incur indebtedness from other sources that entail higher interest rates or shorter maturities.

Capital Requirements

The Company operates in an industry with significant financing requirements and has historically financed its operations primarily through capital contributions and loans from the Government, short-term and long-term borrowings and issuance of bonds, and cash generated by operating activities. The Company expects that these sources will continue to be its principal sources of cash in the future.

In October 2006, the Company commenced participation in the Ambatovy nickel mining project in Madagascar. As of December 31, 2016, the Company's equity interest in the project is 22.5%, and a consortium of Korean investors, including the Company, collectively holds a 27.5% equity interest in the project. Sherritt International Corporation, a Canadian company and the operator of the project, holds a 40.0% equity interest in the project, while Sumitomo Corporation, a Japanese company, holds a 27.5% interest and SNC-Lavalin Inc., a Canadian company, holds the remaining 5.0% interest in the project. Ambatovy is primarily funded by US$2.1 billion of senior project financing through a number of loan agreements with certain export credit agencies, development banks and commercial lenders. The Company and Sherritt, Sumitomo and SNC-Lavalin Group Inc., who are the other project sponsors, have provided completion guarantees, subject to a carve-out for political risk, for the financing until Ambatovy has satisfied the required completion tests. Upon the satisfaction of such completion tests by Ambatovy in September 2015, the project debt became non-recourse to the sponsors and is now solely secured by the project's assets. As of December 31, 2016, US$1.6 billion remained outstanding under the loans, which will mature in June 2024. For the year ended December 31, 2016, the weighted average interest rate of the loans was approximately 2.91%. Ambatovy's other sponsors, including the Company, have agreed to provide Sherritt with partner loans in the aggregate amount of US$600.9 million to fund Sherritt's contributions in the project. These loans, which are fully drawn, are non-recourse to Sherritt and will be repaid solely through Sherritt's share of the distribution from the Ambatovy project. The Company's aggregate investment amount in Ambatovy was Won 1,773.8 billion as of December 31, 2016 and the Company expects to make additional capital contributions of approximately Won 297.7 billion in 2017, which include amounts already contributed by the Company year to date.

Since November 2012, the Company has been making cash contributions to acquire additional equity interests in the Boleo project pursuant to a financing agreement the Company entered into with other consortium partners and Baja Mining Corporation. The Company made a cash contribution and a shareholder loan to MMB in November 2012 in exchange for a transfer of an additional 21% interest from Baja Mining Corporation, and the Company assumed the role of operator of the project. In July 2013, the Company made additional cash contributions and shareholder loans to MMB and acquired an additional 39% interest in the project. As a result, the Company became a 70% shareholder and MMB became a consolidated subsidiary of the Company. As of December 31, 2016, the Company owned a 74% equity interest in MMB. These cash contributions and shareholder loans were largely sourced through a corporate loan facility provided to the Company by the U.S. Export-Import Bank. In 2014, the Company and the other shareholders of MMB converted certain of their outstanding shareholder loans to MMB into equity of MMB, which had the effect of reducing the total liabilities of MMB as well as the consolidated liabilities of the Company as of December 31, 2016. As of December 31, 2016, the Company's aggregate investment amount in the project was Won 1,530.6 billion. The Company expects to make additional capital contributions of Won 88.2 billion in 2017, which include amounts already contributed by the Company year to date. The Company expects that investments in exploration, development and production projects will continue to be the primary source for its capital requirements. The Company may adjust its capital spending on an on-going basis subject to changes in the commodity prices, the production outlook of the global mineral resources industry and global economic conditions in general. The Company also may delay or not implement some of its current capital spending plans based on its assessment of market conditions.

The Company also expects to make capital expenditures for acquisition of mineral resources pursuant to its stockpiling program.

The Company incurred capital expenditures (consisting of cash used for (1) acquisition of property, plant and equipment comprised of land, building, structures, machineries, vehicles, construction in progress and other property and equipment, (2) acquisition of exploration and evaluation assets and acquisition of software, (3) increase of investments in associates and (4) increase of joint venture investments) of Won 336.6 billion for 2014, Won 251.1 billion in 2015 and Won 112.2 billion in 2016.

Repayment of both short-term and long-term borrowings will also require considerable resources. In the ordinary course of its business, the Company enters into short-term and long-term borrowing arrangements for general operations and to fund its direct investment in overseas exploration, development and production projects.

Market Risks

Market risk is the risk of loss related to adverse changes in market prices, including commodity price risk, currency risk and interest rate risk. The Company is exposed to various market risks in its ordinary course business transactions.

Commodity Price Risk

The Company is exposed to fluctuations in prices of mineral resources, whose prices are determined by reference to international market prices. International commodity prices are volatile and are influenced by global as well as regional supply and demand conditions. This volatility has a significant effect on the Company's sales and profit. See "Risk Factors — Fluctuations in commodity prices may adversely affect the Company's results of operations and financial condition" and "— Factors Affecting the Company's Results of Operations and Financial Condition — Fluctuations in Commodity Prices" for a discussion of fluctuations in commodity prices and risks associated therewith.

The Company does not use derivative financing instruments to hedge market risks resulting from fluctuations in commodity prices for its stockpile reserves or its investments in mineral resources development and production.

Foreign Currency Risk

The Company's foreign exchange exposure gives rise to market risk associated with exchange rate movements, which primarily relate to the Company's operating activities and its investments in foreign subsidiaries. Foreign exchange gain/loss resulting from sales of mineral resources by its subsidiaries is determined by the exchange rates as of the dates on which the sales are recorded during the period. From time to time, the Company enters into currency futures contracts and currency swaps to hedge the risks from changes in foreign currency exchange rates. See note 43 of the 2015 and 2016 Financial Statements appearing elsewhere in this Offering Circular.

Interest Rate Risk

Interest rate risk is defined as the risk that the fair value of future cash flows from a financial instrument will fluctuate because of changes in market interest rates. The Company is exposed to interest rate risk mainly arising through interest bearing liabilities and assets. The Company's interest rate risk exposure is mainly dependent on its debt obligations. In particular, the Company is exposed to interest rate risk on its existing floating rate borrowings and on additional debt financings that the Company may periodically undertake for various reasons, including capital expenditures and refinancing of the Company's existing borrowings. An increase in interest rates would adversely affect the Company's ability to service its existing debt and incur new debt for its operations. The Company strives to effectively manage its interest rate risk by periodic monitoring and managing risk factors on a timely basis. From time to time, the Company uses interest rate swaps to hedge against its interest rate exposure. See note 43 of the 2015 and 2016 Financial Statements appearing elsewhere in this Offering Circular.

Inflation

Inflation in Korea was 1.3% in 2014 and 2015 and 0.7% in 2016. The effects of inflation in Korea on the Company's financial condition and results of operations are reflected primarily in salary and selling and administration expenses. Inflation in Korea has not had a significant impact on the Company's results of operations to date.

Credit Risks

Credit risk represents the loss that the Company would incur upon a deterioration in the credit quality of third parties whose securities or other instruments the Company holds. The Company's exposure to credit risk principally arises through its lending and investing activities.

The Company's credit risk management policy objectives are to improve the Company's asset quality, reduce its nonperforming loans and minimize its concentration risk through a diversified, balanced and risk-weighted loan portfolio. The Company continually monitors and improves its credit risk-related policies and guidelines to reflect changing risks in its business. To measure and manage its credit exposures, the Company uses a variety of tools on a daily basis, including assessment of counterparty risk. Potential exposure is generally based on projected worst-case market movements over the life of a transaction. In addition, the Company's credit management system monitors credit exposure to individual counterparties and, on an aggregate basis, to counterparties and their affiliates. In the ordinary course of business, the Company may be subject to a concentration of credit risk to a particular counterparty or borrower.

Business

Overview

The Company is a wholly state-owned enterprise that serves as the execution arm of the Government for mineral resources-related policies of Korea and is mandated to secure a stable supply of key mineral resources, both domestically and overseas, that are strategically important to Korea's economic development. Established as a statutory juridical entity in 1967 under the KORES Act, the Company receives substantial financial support from the Government in the form of capital contributions and loans to undertake the following four main areas of operation:

- direct investment in the exploration, development and production of mineral resources overseas;
- low-cost funding to Korean companies that engage or invest in the exploration, development and production of mineral resources, both in Korea and overseas;
- strategic stockpiling of certain rare mineral resources designated by the Government; and
- providing exploration drilling, survey, research, technical and other Government-subsidized support services to Korean companies engaged in mineral resources exploration.

The Company is currently participating, through various consortiums and joint ventures, in exploration, development and production activities in 32 locations in 17 countries, including 14 production stage projects involving production of bituminous coal, copper, limestone, nickel, zinc, rare earth and uranium. The Company is also the operator of the Boleo copper development project in Baja Peninsula, Mexico in which it holds a 74% stake. In such capacity, the Company exercises control over the day-to-day operations of the project, including managing finances and project personnel and monitoring the overall progress of the project. The Company's aggregate investment amount in the Boleo project was Won 1,530.6 billion as of December 31, 2016, and the Company expects to make additional capital contributions of approximately Won 88.2 billion in 2017, which include amounts already contributed by the Company year to date. The Boleo project commenced initial production of copper in January 2015 and is expected to commence commercial production in the second half of 2017, with an annual production capacity of 51,000 tons of copper, 2,000 tons of cobalt and 28,000 tons of zinc.

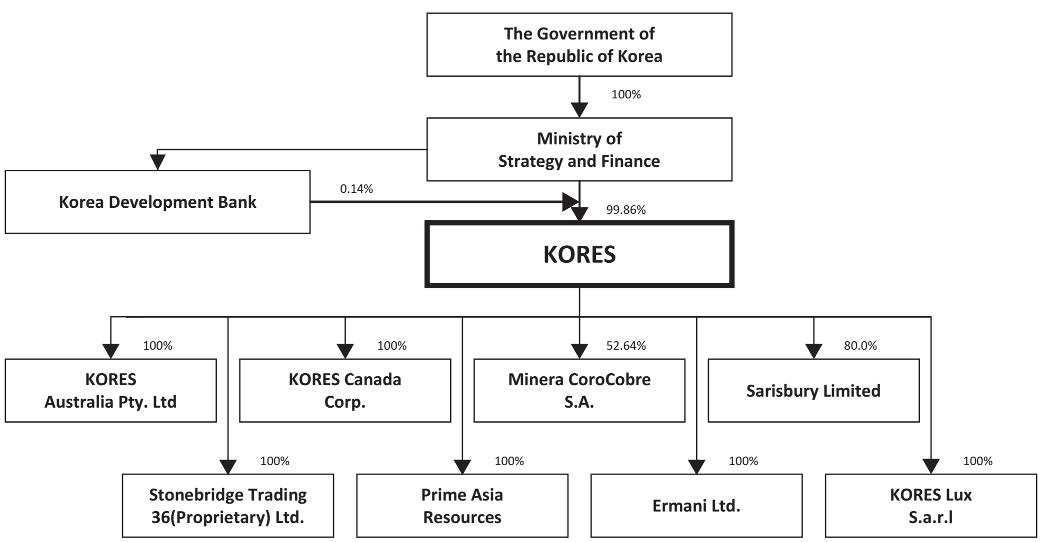
The largest overseas investment made by the Company to date is its 22.5% equity interest in the Ambatovy nickel mining project in Madagascar. The Ambatovy plant commenced commercial production of nickel in January 2014 and is expected to reach its full production capacity in 2018. The Ambatovy plant is one of the world's largest laterite nickel mining, processing and refining operations. The Company's aggregate investment amount in the Ambatovy project was Won 1,773.8 billion as of December 31, 2016, and the Company expects to make additional capital contributions of Won 297.7 billion in 2017, which include amounts already contributed by the Company year to date. Another large overseas investment made by the Company is its 10% equity interest in the Cobre Panama copper and molybdenum project in Panama. The Company's aggregate investment amount in the Cobre Panama project was Won 496.6 billion as of December 31, 2016, and the Company expects to make additional capital contributions of Won 83.5 billion in 2017, which include amounts already contributed by the Company year to date. The Cobre Panama project is expected to commence initial production in 2018 with an annual production capacity of 328,000 tons of copper and 3,500 tons of molybdenum.

As part of its overall policy mandate, the Company is also charged with increasing Korea's self-sufficiency ratio for six key mineral resources identified by the Government, which are bituminous coal, uranium, iron, copper, zinc and nickel, to a target average ratio of 43.0% by 2022 from an estimated actual average ratio of 33.3% in 2016. The self-sufficiency ratio for a mineral represents the amount of such mineral produced by domestic entities, including production by overseas companies in which domestic entities have equity interests, divided by total import amounts of such mineral. In addition, the Company has a long-term strategic mandate to secure a stable supply of ten rare minerals that have been selected in consultation with the Government from those minerals that are used as industrial raw materials and are strategically important to the growth of the Korean economy. They currently consist of chrome, molybdenum, antimony, titanium, tungsten, niobium, selenium, rare earth, gallium and zirconium. In December 2016, the Company reached the Government's stockpiling target of 77,895 tons of these minerals, which is equivalent to the estimated domestic consumption of such minerals for 64.5 days.

The Company's sales amounted to Won 274.5 billion in 2014, Won 297.9 billion in 2015 and Won 330.5 billion in 2016. The Company recorded loss for the year of Won 263.5 billion in 2014, Won 2,063.6 billion in 2015 and Won 987.4 billion in 2016. The Company recorded total comprehensive loss for the year of Won 153.8 billion in 2014, Won 1,945.0 billion in 2015 and Won 978.0 billion in 2016. The Company had total assets of Won 5,852.0 billion, Won 4,687.5 billion and Won 4,365.8 billion as of December 31, 2014, 2015 and 2016, respectively, and total equity of Won 1,831.7 billion and Won 66.9 billion as of December 31, 2014 and 2015, respectively, and total negative equity of Won 840.9 billion as of December 31, 2016.

Relationship with the Government

The Company is wholly-owned by the Government. The Government is required under the KORES Act to contribute all of the Company's authorized capital of up to Won 2 trillion. The Government made capital contributions of Won 224.9 billion, Won 180.2 billion and Won 67.9 billion in 2014, 2015 and 2016, respectively, and the Company had total negative equity of Won 840.9 billion as of December 31, 2016. The Company may only be privatized through an amendment of Article 4 of the KORES Act by the National Assembly, which states that the Government shall fund the Company's authorized capital. Pursuant to the KORES Act, the Government may also guarantee the repayment of the Company's bonds and its other loans and provide financial subsidies for the Company's business activities, although it is not obligated to do so. The Notes offered hereby do not have the benefit of a Government guarantee. The following diagram illustrates the Company's ownership structure as of the date hereof.



The Government, through the Ministry of Trade, Industry and Energy, directs and supervises the Company's activities relating to the exploration, development and production of mineral resources in Korea and overseas, the purchase and stockpiling of mineral reserves, the management of stockpile facilities and the collection and publication of information related to the mineral resources industry. Pursuant to the KORES Act and the Act on the Management of Public Agencies, the President of Korea has the authority to appoint and remove the Company's president and the standing directors who are members of the audit committee, while the Minister of Strategy and Finance appoints the Company's non-standing directors and the Company's president appoints the standing directors who are not members of the audit committee. Furthermore, the Company is required to publicly disclose certain information relating to its operation and management, including, among other matters, its management objectives, budget and business plan, financial statements, personnel data, articles of incorporation, bond register and the minutes of the board of directors (other than certain confidential information).

The Board of Audit and Inspection, which is an independent Government agency that audits all Governmental agencies and Government-controlled entities, audits the Company from time to time. The audit includes a review of the Company's budget and financial statements and an inspection of the Company's business operations and performance. The Board of Audit and Inspection reports its audit results to the National Assembly of Korea and the President of Korea. The Company must also present mid- to long-term management objectives covering five fiscal years to the Ministry of Strategy and Finance and the Minister of Trade, Industry and Energy on an annual basis. The Company is further subject to unscheduled inspections and investigations from time to time by the National Assembly under the Act on the Inspection and Investigation of State Administration of 1988, as amended.

In June 2016, the Ministry of Strategy and Finance and the Ministry of Trade, Industry and Energy announced the June 2016 Government Plan to rationalize the overseas natural resource exploration, development and production activities of government-controlled enterprises, including the Company. The June 2016 Government Plans calls for, among other things, the Company's divesture from overseas exploration, development and production operations in phases, while strengthening the Company's support services to private Korean companies engaged in such operations, and the implementation of a hiring freeze and a reduction in the number of employees and overseas offices. The plan also calls for the further examination of consolidating the Company's strategic stockpiling and support services roles with other government-controlled enterprises. In addition, the Ministry of Trade, Industry and Energy announced that it will transfer the responsibility for administrative tasks related to the day-to-day operation of the SAER funds and the administration of SAER loans for resources development-related projects from the Company to the Korea Energy Agency by the first half of 2017.

Framework for National Energy Plan

In January 2014, the Government announced the Second Energy Master Plan. Under the Framework Act of Low Carbon, Green Growth of 2010, as amended, the Government must establish 20-year master plans, revised every five years, which set out the basic framework and broad goals for an efficient and systematic implementation of energy policies. The First Energy Master Plan, issued in 2008, sought to improve Korea's energy security, use efficiency and the environment.

The Second Energy Master Plan contains policy statements regarding mineral resources, including, among other things:

- enhancing capabilities for long-term energy security, including continued stockpiling of rare minerals, such as chrome and molybdenum, that are essential for domestic industrial production;
- strengthening the foundation of public energy enterprises by enhancing mid- to long-term resource development capabilities and accumulating technology and know-how in mining operations;
- promoting private sector investment in overseas resource development, including launching private-public consortiums; and
- strengthening industrial infrastructure by training high-quality workers and conducting practical research and development.

Overseas Resources Development Master Plan

Under the Overseas Resources Development Business Act of 1983, as last amended on July 24, 2015 and effective as of October 25, 2015 and the Presidential Decree and regulations thereunder (the "Overseas Resources Development Act"), the Government must establish 10-year master plans, revised every five years, for the development of overseas natural resources. Under the Overseas Resources Development Act, if a Korean national plans to develop overseas natural resources, such person must report his or her plans to the Minister of Trade, Industry and Energy.

Pursuant to the Overseas Resources Development Act, the Government is authorized to provide funds to a Korean resident to conduct research and analysis for an overseas resources development business and to acquire the rights to develop such resources. The Government may also provide funds for the installation and operation of facilities required for the development, and funds for leasing or buying the necessary equipment for the development. To ensure the proper use of Government funds, the Ministry of Trade, Industry and Energy delegated to the Company the authority to inspect the books, documents and materials of businesses to which the Government has provided financial support and to evaluate the feasibility of the Government's financial support for the costs being incurred by such businesses.

The Ministry of Trade, Industry and Energy issued in September 2014 the Fifth Overseas Resources Development Master Plan, covering the period from 2013 to 2022 pursuant to the Overseas Resources Development Act. Objectives of the Fifth Overseas Resources Development Master Plan include the following:

- increase Korea's self-sufficiency ratio for six key mineral resources, which are bituminous coal, uranium, iron, copper, zinc and nickel, to a target average ratio of 43.0% by 2022 from an actual average ratio of 33.3% in 2013. The target self-sufficiency ratio is calculated by taking into account (i) production plans of currently acquired exploration, development and production fields; (ii) projected production volume in light of the exploration success rate; and (iii) production volume of new fields planned to be acquired;

- assist the growth of the Company, Korea Gas Corporation and Korea National Oil Corporation into global natural resources development corporations;

- expand the global presence of the Company and other companies investing in the development of overseas resources by establishing development strategies tailored for each resource-producing region, including by entering into partnerships and forming consortiums with other Korean companies to provide construction or other services along with resources development activities;

- support the operation and growth of the Company and other companies involved in overseas resources development by increasing the size of Export-Import Bank of Korea's funds earmarked for such purpose;

- expand the infrastructure for the development of overseas resources by supporting research and development activities of state-owned enterprises engaged in resources development; and

- focus on the development of rare metals, including lithium, non-traditional energy sources and the polar regions.

The following table sets forth Korea's self-sufficiency ratio, actual and targeted, for certain key mineral resources.

Korea's Self-Sufficiency Ratio for Certain Mineral Resources

	Year 2014(1)		Year 2015(1)		Year 2016(2)		Year 2022(3)	
Resources	Actual Ratio (%)	Actual Procurement(4)	Actual Ratio (%)	Actual Procurement(4)	Actual Ratio (%)	Actual Procurement(4)	Target Ratio (%)	Target Procurement(4)
Bituminous Coal	55.4%	68.0 mt	52.8%	66.6 mt	49.9%	62.4 mt	56.0%	107.1 mt
Uranium	11.1	463.8 tU	4.2	134.8 tU	4.0	134.8 tU	28.0	1,581 tU
Iron	18.0	13.2 mt	15.1	11.1 mt	27.9	20.0 mt	31.0	23.6 mt
Copper	10.7	101.4 kt	5.5	57.3 kt	6.5	68.9 kt	33.0	428.9 kt
Zinc	21.5	224.5 kt	21.2	236.4 kt	22.8	252.9 kt	22.0	337.0 kt
Nickel	61.7	79.1 kt	68.9	89.4 kt	63.2	99.6 kt	38.0	67.5 kt

Notes:

(1) Source: The Company's internal data

(2) Source: The Company's preliminary internal data

(3) Source: The Fifth Overseas Resources Development Master Plan

(4) mt = million tons. kt = kilo tons. tU = tons U.

Administration of the Special Accounts for Energy and Resources

In 1995, the Government established the SAER pursuant to the Act on the Special Accounts for Energy and Resources-related Projects (the "SAER Act"), which combines six energy-related funds that were previously operated by the Government. Prior to 1995, to ensure a stable supply of energy and natural resources for the Korean economy and to promote the development of new energy resources, the Government operated six energy- and resources-related funds, namely the Oil Business Fund, the Coal Industry Support Fund, the Coal Industry Stabilization Fund, the Overseas Mineral Resources Development Fund, the Energy Use Rationalization Fund and the Natural Gas Safety Management Fund. These funds were designed to support a variety of public and private projects, including those relating to the exploration and development of mineral resources both domestically and abroad, the stockpiling of mineral resources, the development of deep-sea mineral resources and the development of alternative energy sources and research activities related to the foregoing.

Pursuant to the SAER Act, the Minister of Trade, Industry and Energy oversees the management and operation of the SAER. The Minister of Trade, Industry and Energy delegated to Korea National Oil Corporation administrative tasks related to the day-to-day operation of the SAER. The day-to-day administrative tasks include the collection of various taxes, assessments and other government revenues which constitute a part of the sources for the SAER funds as well as the disbursement of the SAER funds according to the budget. The Government's annual budget for the SAER is prepared with input from Government-controlled and private entities engaged in the energy and natural resources business, the Ministry of Trade, Industry and Energy and the Ministry of Strategy and Finance, and approved by the National Assembly.

A significant portion of the SAER budget consists of loans to be made for various energy and resources-related projects. The funds for the loans are first provided by Korea National Oil Corporation, as the day-to-day administrator of the entire SAER, to the following six government agencies that manage and on-lend the funds: the Company, Korea National Oil Corporation, Korea Coal Corporation, Korea Energy Management Corporation, Mine Reclamation Corp. and Korea Gas Safety Corporation. The Company manages the SAER loans related to the mineral resources industry, while the other loans are managed by the other five Government agencies for their respective energy fields. Under the June 2016 Government Plan, the Ministry of Trade, Industry and Energy announced that it will transfer the responsibility for administrative tasks related to the day-to-day operation of the SAER funds and the administration of SAER loans for resources development-related projects from the Company to the Korea Energy Agency by the first half of 2017.

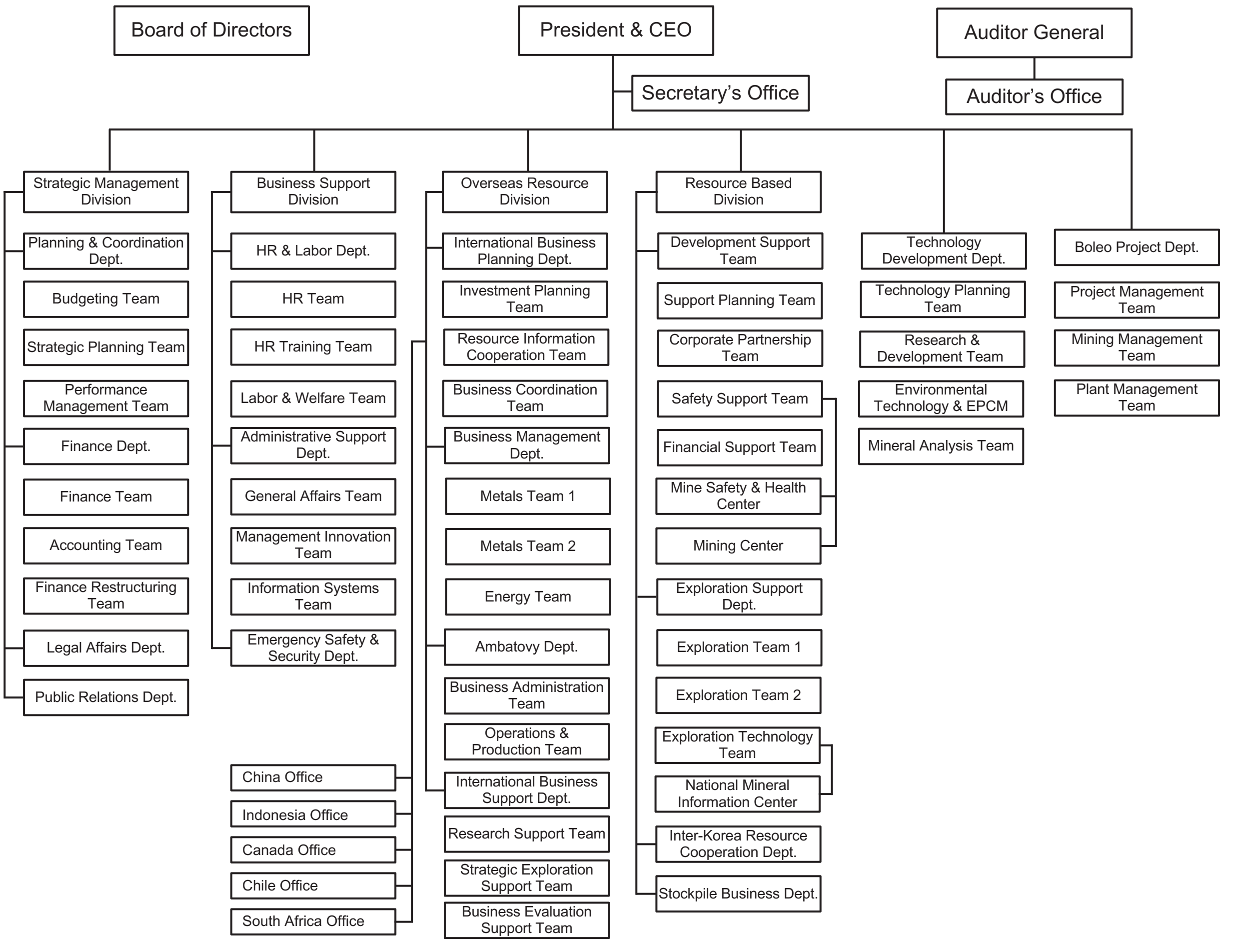
SAER loans for the mineral resources industry are generally for overseas mineral resources exploration, development and production projects. The loans for the mineral resources industry are available for use by the Company and by certain qualifying third-party borrowers engaged in mineral resources-related businesses.

The funds from the SAER that are earmarked for loans to the mineral resources industry are provided to the Company and then on-lent by the Company to third parties; therefore, such funds are not recorded as borrowings or loans on the Company's financial statements, and the Company records a certain percentage of the interest from such loans that it receives from the Government for its management of the SAER funds as income.

As of December 31, 2016, the total outstanding balance of the SAER loans extended by the Company for overseas exploration, development and production activities was Won 316.0 billion. In administering the mineral resources-related SAER loans, the Company receives applications for the loans, which are reviewed jointly by the Company and the Government's loan review committee to analyze the technical feasibility of the projects and the business plans. Under the SAER Act, loans used to fund exploration projects that do not result in discoveries may be exempted from repayment of all or part of the principal amount of and interest on the loan if they meet the established criteria set by the Ministry of Trade, Industry and Energy and obtain an approval from the Minister of Trade, Industry and Energy.

Organizational Structure

The Company has an integrated exploration and development structure whereby the Overseas Resource Division specializes in, and is responsible for, individual stages of exploration, development and production, as well as specializing in particular mineral resources and geographic regions. Initial exploration and planning are conducted through the International Business Planning Department in consultation with the Business Management Department and the International Business Support Department, as applicable, within the Overseas Resource Division. Financial support, in the form of SAER loans and other loans, as well as mining exploration support, including exploration drilling and information gathering and analysis, are provided by the Company's Business Support Division. The Company's Technology Research Institute provides various technical and research and development support to the Korean mineral resources industry. The following diagram illustrates the Company's organizational structure as of the date hereof.



Business Operations

The Company has four main areas of operation: direct investment, lending, strategic stockpiling and Government-subsidized support services. These operations aim to serve as the execution arm of the Government's policy goals for the development of overseas and domestic mineral resources.

The following table presents a breakdown of the Company's sales revenues by business operation for 2014, 2015 and 2016.

	For the Year Ended December 31,			Changes			
				2014 versus 2015		2015 versus 2016	
	2014	2015	2016	Amount	%	Amount	%
	(in billions of Won, except percentages)						
Direct investment and lending[(1)]	₩244.1	₩271.6	₩308.6	₩27.5	11.3%	₩37.0	13.6%
Strategic stockpiling[(2)]	—	—	—	—	—	—	—
Government-subsidized support services[(3)]	30.4	26.4	21.8	(4.0)	(13.2)	(4.6)	(17.4)
Total sales	₩274.5	₩297.9	₩330.5	₩23.4	8.5	₩32.6	10.9

Notes:

(1) Includes reversal of allowance for impairment losses on financial assets, gain on foreign currency translation, gain on foreign exchange, gain arising from equity method investments, gain on disposal of investment securities and other income related to direct investment and lending activities.

(2) The Company reached its stockpiling targets at the end of 2016 and is currently formulating plans to make excess stockpile available to Korean companies on a commercial basis.
(3) Includes fee income from domestic development and support services activities.

For a breakdown of the Company's sales revenues by geographical location, see note 4 of the audited consolidated financial statements of the Company appearing elsewhere in this Offering Circular, which provides a segmentation of the Company's sales by the geographic location of the entity generating such sales. Sales revenues generated by the Company on a separate basis are deemed to have originated from Korea, whereas sales revenues generated by each of the Company's overseas consolidated subsidiaries are deemed to have originated from the country where such subsidiary is located.

Direct Investment in Exploration, Development and Production

The Company directly invests in the exploration, development and production of overseas mineral resources. Since 2008, as part of a consortium or joint venture, the Company has engaged in overseas exploration, development and production in various locations, including Australia, Canada, Chile, China, Madagascar, Mexico and South Africa. The Company invested Won 351.4 billion, Won 308.7 billion and Won 605.2 billion in overseas exploration, development and production projects in 2014, 2015 and 2016, respectively. It currently expects to invest Won 472.2 billion in its existing overseas investment projects in 2017. As of December 31, 2016, the Company had directly invested Won 4,865.0 billion in its overseas exploration, development and production activities.

Contractual arrangements among participants in a joint venture are usually governed by an operating agreement, which usually provides that costs, entitlements to production and liabilities are to be shared according to each party's percentage interest in the joint venture. Upon completion of the initial exploration phase, and if the Company and its joint venture partners determine that a project has commercially viable development potential, the project will enter the development phase and join the development portfolio. The joint venture projects are typically structured so that following the initial equity investment by the participants in the joint venture project, a shareholder loan is extended to the project by each joint venture partner in proportion to such partner's percentage interest in the project in return for the receipt of interest payments that are issued according to the schedule associated with such loan. Interest payments on such shareholder loan are typically deferred for a period of time, allowing the project to reach production stage and generate cash flow.

Reserves Data

"Reserve" is that part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination.

"Proven reserves" are reserves for which quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes and the grade and quality are computed from the results of detailed sampling. The sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that the size, shape, depth and mineral content of reserves are well-established.

"Probable reserves" are reserves for which quantity and grade or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced.

Estimation and evaluation of reserves naturally involve multiple uncertainties. The accuracy of any reserve evaluation depends on the quality of available information and engineering and geological interpretation. Based on the results of drilling, testing and production after the date of this Offering Circular, reserves may be significantly restated upwards or downwards. Significant changes in the Company's mineable reserve amounts could have a material adverse effect on the Company's results of operations and financial condition. See

"Risk Factors — The ore reserve estimates in this Offering Circular are only estimates and may require substantial revisions as a result of future drilling, testing and production, and as such, the Company's actual production, revenues and expenditures may also differ materially from the estimates."

Production Stage

The Company deems projects to be in the production stage when they have the needed operational infrastructure to allow for the extraction of resources and generate revenues. The following table sets forth the Company's projects in the production stage by country, resource and the capital investments made by the Company up to 2013 and for the years ended December 31, 2014, 2015 and 2016.

							Investment Amount (in billions of Won)				
Resource	**Project**	**Country**	**Company's Stake**	**Korean Consortium's Stake**	**Participation Year**	**Production Capacity(1)**	**Up to 2013**	**2014**	**2015**	**2016**	**Total**
Bituminous Coal	Springvale	Australia	25.00%	50.00%	2000	4.3 mtpa	₩ 23.8	₩ —	₩ —	₩ —	₩ 23.8
	Minerva	Australia	4.00	4.00	2006	2.4 mtpa	7.1	—	—	—	7.1
	Cockatoo(2)	Australia	0.06	1.70	2006	470 ktpa	12.1	—	—	—	12.1
	Angus Place(3)	Australia	25.00	50.00	2007	3.3 mtpa	24.9	—	—	—	24.9
	Moolarben	Australia	4.00	9.00	2008	12.0 mtpa	59.1	—	—	—	59.1
	Narrabri	Australia	2.50	7.50	2009	8.0 mtpa	61.0	—	—	—	61.0
Copper	Capstone	USA, Canada and Mexico	10.40	10.40	2011	167 ktpa	196.1	—	—	—	196.1
	Boleo(4)	Mexico	74.00	90.00	2008	51 ktpa	979.4	153.2	83.0	315.0	1,530.6
Copper and Zinc	Rapu-Rapu(5)	Philippines	28.00	70.00	2002	—	24.5	—	—	—	24.5
Rare Earth	Xian Maxsun	China	49.00	49.00	2003	13 ktpa	13.4	—	—	—	13.4
	Baotou Yongxin(6)	China	48.33	100.00	2010	—	7.2	—	11.4	—	18.6
Limestone	Zhangjiagang	China	49.00	100.00	2005	408.0 ktpa	14.3	—	—	—	14.3
Nickel	Ambatovy	Madagascar	22.50	27.50	2006	60.0 ktpa	1,339.7	102.7	139.8	191.6	1,773.8
Uranium	Teguidda(7)	Niger	4.00	4.00	2009	700 tUpa	17.1	—	—	—	17.1
Subtotal							2,779.7	255.9	234.2	506.6	3,776.4
Terminated projects(8)							4.2	—	31.9	—	36.1
Total							₩2,783.9	₩255.9	₩266.1	₩506.6	₩3,812.5

Notes:

(1) mtpa = million tons per annum. ktpa = kilo tons per annum. tUpa = tons U per annum.

(2) Entered into a voluntary administration in November 2015 and currently under rehabilitation.

(3) Production ceased provisionally in February 2015 until further notice and idle machinery is scheduled to be moved to the Springvale mine. Maintenance work is currently being carried out at Angus Place in preparation for future commencement of production.

(4) Estimated annual production capacity of 51.0 ktpa of copper, 2.0 ktpa of cobalt and 28.0 ktpa of zinc. The initial production of copper commenced in January 2015 and commercial production is expected to commence in the second half of 2017.

(5) Production ceased upon exhaustion of reserves and the mine closure process has been halted until further notice.

(6) Production ceased in July 2015, and the project is in the process of termination.

(7) Production ceased in December 2014 until further notice, primarily due to decreases in the market price of uranium and the financial difficulties experienced by the joint venture.

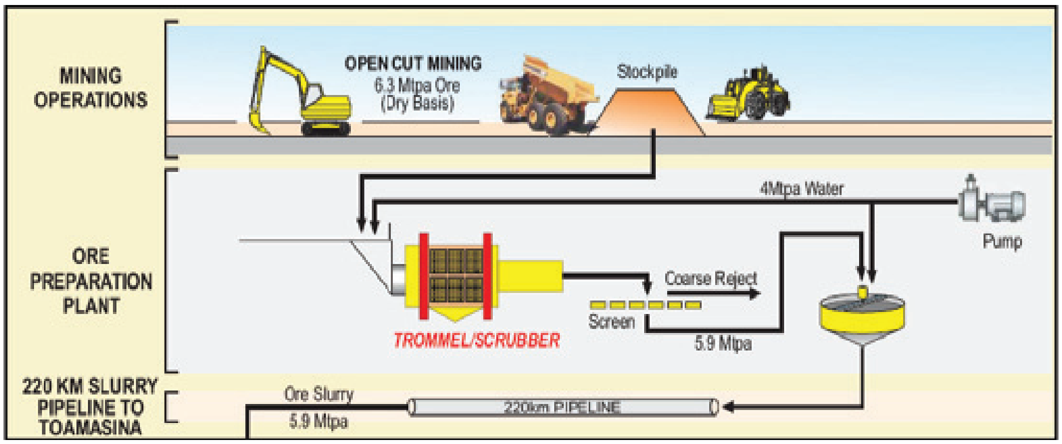
(8) Represents the Company's direct investment amounts in overseas projects in production stage, in which the Company's participation has been terminated, including Won 31.9 billion that the Company had invested in BeiFang Tong Ye, a copper mining project in China. The Company's participation in BeiFang Tong Ye was terminated in August 2015.

The following is a summary description of some of the Company's major projects in the production stage.

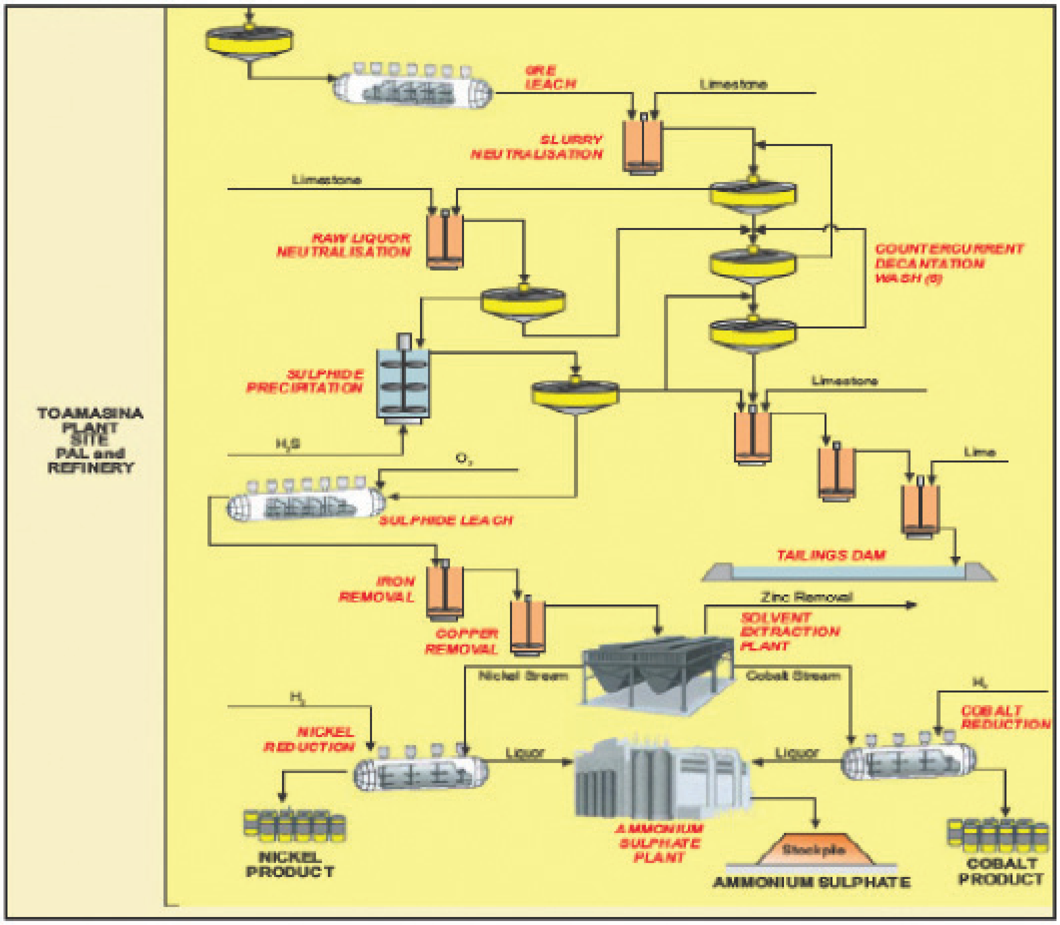
Ambatovy. Ambatovy is a large tonnage nickel project located 80 kilometers east of Antananarivo, the capital of Madagascar. As of December 31, 2016, the Company's equity interest in the project is 22.5%, and a consortium of Korean investors, including the Company, collectively holds a 27.5% equity interest in the project. Sherritt International Corporation, a Canadian company and operator of the project, holds a 40% equity interest in the project, while Sumitomo Corporation, a Japanese company, holds the remaining 32.5% interest in the project. Ambatovy has proven and probable reserves of 190 million tons of 0.85% nickel. The annual production capacity of Ambatovy is 60,000 tons (100% basis) of nickel, 5,600 tons (100% basis) of cobalt and 200,000 tons of ammonium sulphate, an effluent that can be used as fertilizer.

Construction of the project began in 2007 and the initial production of nickel commenced in the second half of 2012. Slurried laterite ore from the mines is delivered via a 220 kilometers-long pipeline to a processing plant and refinery located near the Port of Toamasina, where the slurry is refined into high-grade nickel and cobalt briquettes, which are then shipped to customers around the world. Commercial production of nickel began in January 2014, and the plant is expected to reach full production capacity in 2018.

The following diagram shows the mining operations and the ore preparation process used in Ambatovy.



The following diagram shows the hydrometallurgical process used in Ambatovy to produce finished nickel and cobalt briquettes.

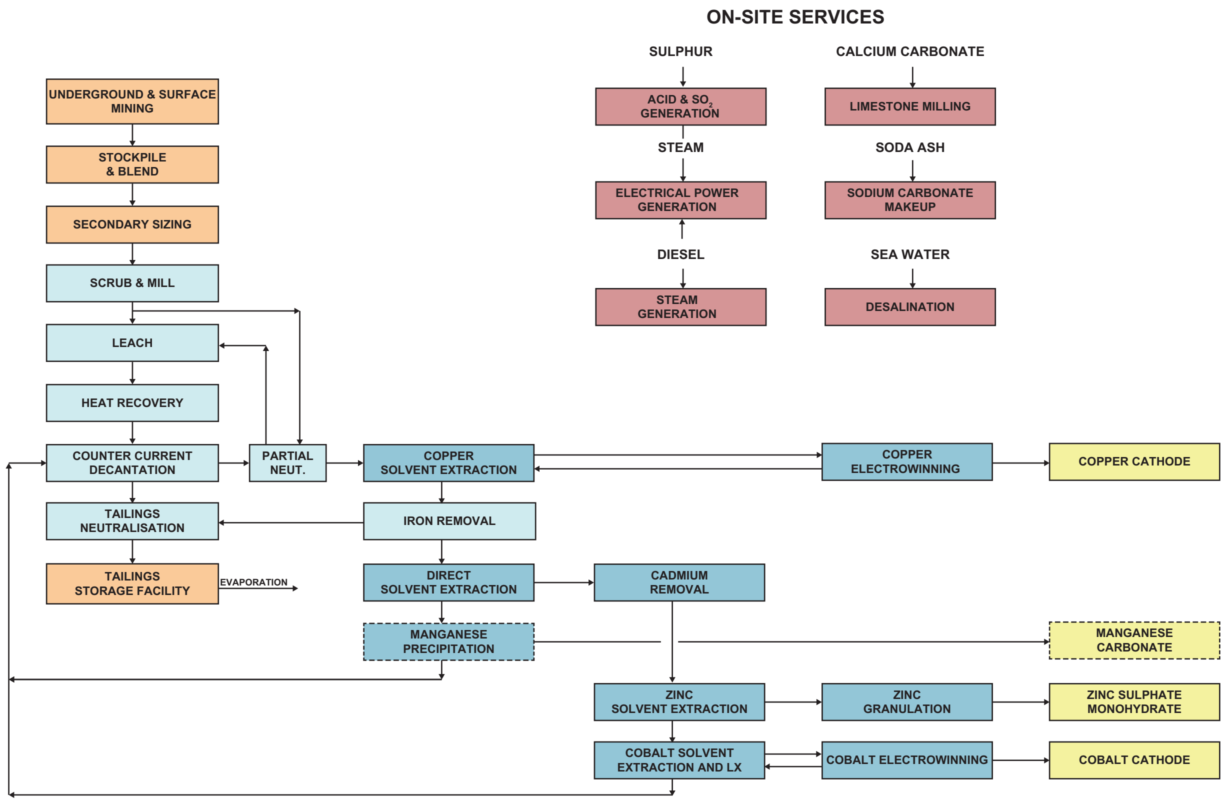


The Korean consortium of investors, which is led by the Company, currently holds a 27.5% interest in the Ambatovy Project and purchase rights for 50% of future production. Ambatovy is primarily funded by US$2.1 billion of senior project financing through a number of loan agreements with certain export credit agencies, development banks and commercial lenders. The Company, Sherritt and Sumitomo had provided completion guarantees, subject to a carve-out for political risk, for the financing until Ambatovy satisfied the required completion tests. Upon the satisfaction of such completion tests by Ambatovy in September 2015, the project debt became non-recourse to the sponsors and is now solely secured by the project's assets. As of December 31, 2016, US$1.6 billion remained outstanding under the loans, which will mature in June 2024. For the year ended December 31, 2016, the weighted average interest rate of the loans was approximately 2.91%. Ambatovy's other sponsors, including the Company, have agreed to provide Sherritt with partner loans in the aggregate amount of US$600.9 million to fund Sherritt's contributions in the project. These loans, which are fully drawn, are non-recourse to Sherritt and will be repaid solely through Sherritt's share of the distribution from the Ambatovy project. The Company's aggregate investment in Ambatovy was Won 1,773.8 billion as of December 31, 2016 and the Company expects to make additional capital contributions of approximately Won 297.7 billion in 2017, which include amounts already contributed by the Company year to date.

Boleo. The Boleo copper-cobalt-zinc deposit is located in Baja Peninsula in Mexico. The Company is a 74% stakeholder and the operator of the project. A consortium led by the Company, comprising the Company, LS-Nikko Copper Inc., Hyundai Hysco, SK Networks Co. Ltd. and Iljin Materials Co., Ltd., together holds a

90% equity interest in the project. The remaining 10% is held by Carmrova Resources (previously named Baja Mining Corporation), a Canadian company and previous operator of the project. The proven and probable reserves of Boleo is 44.7 million tons of copper with an annual production capacity of 51,000 tons of copper, 2,000 tons of cobalt and 28,000 tons of zinc.

Boleo involves the development of an underground copper-cobalt-zinc mine located on the east coast of Baja Peninsula and the operation of a complex processing plant that extracts zinc and cobalt as byproducts of its copper extraction. The following flow diagram shows the hydrometallurgical process used in Boleo to produce finished copper, cobalt and zinc products.



The Korean consortium was initially a minority stakeholder with a 30% equity interest in the project, with the remaining 70% owned by Baja Mining Corporation. Due to significant delays and cost overruns while it was operated by the previous operator, Boleo has since undergone financial and operational restructuring. In order to fund project costs, the Company, as part of the Korean consortium and by itself, injected additional capital contributions, and the Company acquired an additional ownership interest in MMB, the local subsidiary entity, and became the operator of the project in 2014. As of December 31, 2016, the Company owned a 74% equity interest in MMB and its aggregate investment amount in the Boleo project was Won 1,530.6 billion. The Company expects to make additional capital contributions of Won 88.2 billion in 2017, which include amounts already contributed by the Company year to date. The initial production of copper commenced in January 2015 and commercial production is expected to commence in the second half of 2017.

Springvale and Angus Place. The Springvale and Angus Place bituminous coal mines are located in Lithgow in Australia, approximately 160 kilometers northwest of Sydney, on a site covering an area of approximately 31.3 square kilometers. Each of the Company and SK Networks Co., Ltd., a Korean company, holds a 25% equity interest in the project, and Banpu Public Company Limited, a Thai company, holds a 50% equity interest in each of these projects. The proven and probable reserves of Springvale is 38 million tons with an annual production capacity of 4.3 million tons of coal, while the proven and probable reserves of Angus Place is 55 million tons with an annual production capacity of 3.3 million tons of coal. Angus Place ceased production provisionally in February 2015 until further notice due primarily to a downturn in the coal industry and the cessation of operation of a nearby power plant, which was a major domestic client of Angus Place, in December 2014. Idle machinery from Angus Place was moved to Springvale, and Springvale commenced production in December 2016.

Moolarben. The Moolarben bituminous coal mine is located in New South Wales in Australia, approximately 290 kilometers northwest of Sydney. The Company holds a 4% equity interest in the project, while four Korean electric companies each holds a 1.25% interest in the project. Yanzhou Coal Mining Company, a Chinese company, holds an 81% equity interest in the project and Sojitz Corporation, a Japanese company, holds the remaining 10% interest. The proven and probable reserves of Moolarben is 295 million tons with an annual production capacity of 12 million tons. Production commenced in May 2010.

Narrabri. The Narrabri bituminous coal mine is located in Gunnedah basin in Australia, approximately 28 kilometers south of Narrabri. The Company holds a 2.5% equity interest in the project, while Whitehaven Coal Pty Ltd. holds a 70% interest and each of EDF Trading Australia Pty Ltd, J-Power Australia Pty Ltd. and Upper Horn Investment Pty Ltd. holds a 7.5% equity interest. Daewoo International Corporation, a Korean company, holds the remaining 5.0% interest. The proven and probable reserves of Narrabri is 122 million tons with an annual production capacity of 8 million tons. Production commenced in October 2012.

Capstone. The Company holds a 10.4% interest in Capstone Corporation, a Canadian company that operates through its wholly-owned subsidiaries three copper mines in production stage. The Minto copper mine is located in Yukon, Canada, the Cozamin copper mine is located in Zacatecas State, Mexico, and the Pinto Valley mine is in Arizona, the United States. The proven and probable reserves of Minto is 5.5 million tons of copper with an annual production capacity of 18,000 tons, whereas the proven and probable reserves of Cozamin is 7.2 million tons of copper with an annual production capacity of 18,000 tons. The Pinto Valley mine, which Capstone Corporation acquired in October 2013, has proven and probable reserves of 473.8 million tons of copper with an annual production capacity of 57,000 tons.

Development Stage

Projects in the development stage are those that are undergoing preparation for production and for which the proven and probable reserve amounts have been identified and are undergoing a quality assessment of the minerals. The following table sets forth the Company's projects in the development stage by country, resource and the capital investments made by the Company up to 2013 and for the years ended December 31, 2014, 2015 and 2016.

Resource	Project	Country	Company's Stake	Korean Consortium's Stake	Participation Year	Estimated Production Capacity(1)	Investment Amount (in billions of Won) Up to 2013	2014	2015	2016	Total
Bituminous Coal	Togara North	Australia	8.33%	25.00%	1994	Feasibility under review	₩ 13.6	₩ —	₩ —	₩ 0.1	₩ 13.7
	Wyong	Australia	82.25	95.00	1995	Securing development permits	53.8	5.0	1.1	1.7	61.6
Copper	Marcona	Peru	15.00	30.00	2004	Receiving proceeds from sale	35.1	5.4	3.1	2.0	45.6
	Shakespeare	Canada	0.07	0.07	2005	Under review for sale	2.5	—	—	—	2.5
	Cobre Panama(2)	Panama	10.00	20.00	2009	331.5 ktpa from 2017(3)	265.0	75.6	61.4	94.6	496.6
	Rosemont	U.S.A.	10.00	20.00	2010	108.4 ktpa from 2018(4)	39.5	0.0	0.0	0.0	39.5
Lithium	NX Uno	Chile	12.00	30.00	2010	Termination in process(5)	18.3	—	—	—	18.3
Subtotal							427.8	86.0	65.6	98.4	677.8
Terminated projects(6)							8.4	—	—	—	8.4
Total							₩436.2	₩86.0	₩65.6	₩98.4	₩686.2

Notes:

(1) mtpa = million tons per annum. ktpa = kilo tons per annum.

(2) Possible sale of the Company's equity stake in the project under consideration.

(3) Estimated annual production capacity of 328.0 ktpa of copper and 3.5 ktpa of molybdenum.

(4) Estimated annual production capacity of 106.0 ktpa of copper and 2.4 ktpa of molybdenum.

(5) Dividend tax imposed by the local tax authority refunded and capital investments by the Company partially recovered. Termination of the project is in process.

(6) Represents the Company's direct investment amounts in overseas projects in development stage, in which the Company's participation has been terminated.

The following is a summary description of some of the Company's major projects in the development stage.

Cobre Panama. The Cobre Panama copper and molybdenum deposit is located in Donoso in Panama, approximately 120 kilometers west of Panama City. Each of the Company and LS-Nikko Copper Inc., a Korean company, holds a 10% equity interest in the project. First Quantum Minerals Ltd., a Canadian company, holds the remaining 80% interest. The proven and probable reserves of Cobre Panama is 3,183 million tons. The initial production is expected to commence in 2017 with an annual production capacity of 328,000 tons of copper and 3,500 tons of molybdenum.

Wyong. The Wyong bituminous coal deposit is located in Newcastle in Australia, approximately 100 kilometers northeast of Sydney, on a site covering an area of approximately 213 square kilometers. The Company holds an 82.25% equity interest in the project, while SK Networks Co., Ltd. holds an 8.5% interest and Kyung Dong Industrial Co., Ltd. holds a 4.25% interest. Both SK Networks and Kyung Dong Industrial are Korean companies. Sojitz Corporation, a Japanese company, holds the remaining 5% interest. The proven and probable reserves of Wyong is 150 million tons. The development of the Wyong project is currently under review by the regulatory authorities for approval of commencement.

Exploration Stage

The Company's exploration program is focused on identifying and expanding its commercially viable production projects. The process of discovery runs from early-stage mapping through to drilling and evaluation. The Company prioritizes target sites based on its assessment of the relative attractiveness of each mineral. As exploring for mineral resources is a time-consuming and capital-intensive process, the Company's Business Development Division carefully analyzes each prospective location along with its partners and third party technical experts to determine the proper scope of each project, as well as consult an internal committee composed of heads of relevant departments and technical experts before making investment decisions.

The following table sets forth the Company's projects in the exploration stage by country, resource and the capital investments made by the Company up to 2013 and for the years ended December 31, 2014, 2015 and 2016.

							Investment Amount (in billions of Won)				
Resource	**Project**	**Country**	**Company's Stake**	**Korean Consortium's Stake**	**Participation Year**	**Status**	**Up to 2013**	**2014**	**2015**	**2016**	**Total**
Coal	Athena	Australia	4.00%	4.00%	2006	Exploration in process	₩ 1.7	₩ —	₩ —	₩0.0	₩ 1.7
	Vlakplaats	South Africa	37.00	37.00	2010	Termination in process	18.7	—	—	—	18.7
	Kapuas	Indonesia	11.70	11.70	2011	Sale of equity in process(1)	31.4	0.6	—	—	32.0
	Erdenet	Mongolia	25.00	51.00	2006	Termination in process	—	—	—	—	—
Copper and Iron	Santo Domingo	Chile	30.00	30.00	2011	Exploration in process(2)	239.2	7.6	7.8	—	254.6
Uranium	Cree-East	Canada	12.50	50.00	2007	Exit strategy under review	5.1	—	—	—	5.1
	Marree	Australia	20.00	40.00	2008	Termination in process	2.8	—	—	—	2.8
	Mkuju	Tanzania	28.0	28.0	2012	Termination in process	2.3	0.0	—	—	2.3
Lithium	Sal de Vida	Argentina	10.00	30.00	2010	Termination in process	6.3	—	—	—	6.3
Rare Earth	Zandkopsdrift	South Africa	10.00	10.00	2011	Exploration in process	27.3	0.9	0.9	0.2	29.3
Lead and Zinc	Houaphanh	Laos	50.00	100.00	2013	Termination in process	0.5	0.3	0.0	0.0	0.8
Subtotal							335.3	9.4	8.7	0.2	353.6
Terminated projects(3)							3.1	3.8	5.9	—	12.8
Total							₩338.4	₩13.2	₩14.6	₩0.2	₩366.4

Notes:

(1) Entered into a share repurchase agreement in January 2015 to re-sell the Company's equity interest in the project.

(2) Delayed further development of the project in September 2015, due primarily to decreases in the market price of copper.
(3) Represents the Company's direct investment amounts in overseas projects in exploration stage, in which the Company's participation has been terminated, including Won 5.9 billion that the Company had invested in CoroCoro, a copper mining project in Bolivia. The Company's participation in CoroCoro was terminated in the first half of 2015.

The following is a summary description of some of the Company's major projects in the exploration stage.

Santo Domingo. The Santo Domingo copper project is located in Region III in Chile, approximately 7 kilometers south of Diego de Almagro. Capstone Mining Corp, a Canadian company and operator of the project, holds a 70% equity interest in the project and the Company holds the remaining 30% interest in the project. The estimated reserves of Santo Domingo is 392 million tons with an estimated annual production capacity of 58,000 tons of copper and 2.7 million tons of iron. In June 2014, detailed definitive feasibility studies on the project were completed, and in July 2015, the project received approval of its environmental impact assessment. In September 2015, due primarily to decreases in the market price of copper, further development of the project has been delayed.

Kapuas. The Kapuas coal project is located in Central Kalimantan in Indonesia. The Company holds a 11.7% equity interest in the project, while Korindo, an Indonesian company, holds a 30.6% interest, Prime Great Wise Capital Inc., a British Virgin Islands company, holds a 47.69% interest, and Bara Sejahtera Bersama, an Indonesian company, holds the remaining 10.01% interest in the project. The estimated reserves of Kapuas is 337 million tons of bituminous coal with an estimated annual production capacity of 4 million tons. Due to delays in obtaining necessary permits from the Indonesian government, the Company decided to terminate its participation in the project and entered into a share repurchase agreement in January 2015 with Prime Great Wise Capital Inc. to re-sell the Company's equity interest in the project for US$27.8 million. As of December 31, 2016, the Company has received US$14.0 million of the contracted US$27.8 million under the share repurchase agreement.

Zandkopsdrift. The Zandkopsdrift rare earth project is located in the Namaqualand region of the Northern Cape Province of South Africa, approximately 450 kilometers north of Cape Town. Frontier Rare Earths Limited, a Canadian company and operator of the project, holds a 64% equity interest in the project, while the Black Economic Empowerment shareholders hold a 26% interest in the project pursuant to the relevant South African Black Economic Empowerment legislation. The Company holds the remaining 10% interest in the project. The estimated reserves of Zandkopsdrift is 41.1 million tons of rare earth. A preliminary feasibility study on the project was completed in November 2015. The Company is currently reviewing the future direction of the project as it views the project to lack economic feasibility.

Types of Exploration, Development and Production Agreements Entered into by the Company

The Company participates in the exploration, development and production of mineral resources in a number of countries and geographic regions and is therefore subject to a broad range of rules and regulations which cover many aspects of exploration, development and production activities, including lease tenure, pricing, environmental protection, export taxes and foreign exchange. The Company enters into a wide range of contractual arrangements governing the Company's projects and its interest in mineral resources from those projects. Depending on the type of project, the Company enters into off-take agreements, exclusive sales contracts, or permits and licenses from a government-controlled entity or a national mineral resources company of the country in which such project is located.

For most of its projects, the Company does not engage in the actual operation of a project but enters into joint ventures with industry-leading operators and engineering contractors or teams up as a minority investor with an already established consortium. The terms of the joint venture agreements, off-take agreements and sales agreements and other contractual arrangements vary substantially among different countries and geographic regions, project types and the time the agreements were entered into.

Investment Criteria

The Company takes a systematic approach in making an investment decision. The Company begins by collecting publicly-available information, correspondence with diplomatic officers based overseas and Korea Trade-Investment Promotion Agency trade officials and governments of countries with relevant resources, as well as information obtained from investment partners after conclusion of a confidentiality agreement. After such information has been compiled, it is reviewed by a team that specializes in the particular resource in question. A comparative analysis is conducted with nearby projects that are undergoing production while evaluating the data against the Company's internal investment criteria. A preliminary decision is then made on the investment after a review is conducted by the Preliminary Investment Committee. On-site due diligence may also be conducted by technical specialists. If the Preliminary Investment Committee has approved of the investment, negotiations will commence, during which basic investment terms will be discussed among the Company's technicians, consortium members and external advisers, among others. Feedback on the participation terms will be given by analyzing investment research and input from the Company's legal, financial and accounting teams. A technical and business review will be conducted on the ore reserve, quality, mining, method, mineral processing method, market outlook and distribution strategy. Once the basic terms have been agreed upon, detailed due diligence will be conducted by the Company's technical specialists, consortium members and external professionals. If the Preliminary Investment Committee decides to invest, it will escalate its decision to the Investment Advisory Committee composed of independent consultants, which will then escalate its decision to the board of directors. If the board of directors approves, the Company will sign the relevant agreement and begin pursuing the relevant regulatory approvals from governments. After such approvals are received, a joint venture corporation will be established, as may be necessary.

In terms of making investment decisions, the Company has certain technical criteria based on reserve size, reserve quality and production capacity adequacy. Based on Taylor's rule, a methodology employed to estimate mine life, the Company will determine whether a given project has an adequate number of mining years based on the reserve size and production capacity. The Company will also examine marketing factors in making an investment decision. Such factors include the potential for market development and distribution price adequacy. In examining the potential for market development, the Company will examine the quality of the product, the expected purchasers and distribution strategy.

Lending

Overseas Lending

The Company provides low-cost funding to Korean companies or to those corporations that are a subsidiary of a company that is incorporated in Korea that develop and produce overseas resources directly. In doing so, the Company aims to encourage investment by Korean companies that engage or invest in the exploration, development and production of mineral resources overseas with the objective of securing a stable source of mineral resources. As the administrator of the SAER, the funds from the SAER that are earmarked for loans to the mineral resources industry are provided to the Company and then on-lent by the Company, generally for overseas mineral resources development and production projects. As of December 31, 2016, the SAER loans were provided to the Company at an interest rate that is lower than the three-year sovereign bond rate of Korea, and they were on-lent by the Company at an interest rate that is approximately 1% above the interest rate at which the loans were provided to the Company.

As of December 31, 2016, the Company's ten largest overseas lending exposures totaled Won 259.9 billion and accounted for 77.5% of the Company's total outstanding overseas loans. The following table sets forth, as of December 31, 2016, the Company's total exposures to these top ten borrowers.

Borrower	Outstanding (in billions of Won)	% of Total Outstanding Overseas Loans
LS-Nikko Copper Inc.	₩ 78.4	23.3%
POSCO DAEWOO Corp.	54.6	16.3
POSCO	26.1	7.8
SK Networks Co., Ltd.	26.0	7.8
LG International Corp.	20.9	6.2
STX Corp.	14.7	4.4
Korea Hydro & Nuclear Power Co., Ltd.	12.1	3.6
Korea Zinc Inc.	9.4	2.8
POSCO Canada Ltd.	9.3	2.8
Hyundai Steel Company	8.4	2.5
Total	₩259.9	77.5%

Domestic Lending

The Company provides low-cost funding to domestic resources developers, researchers and other similar parties in order to facilitate the efficient development of domestic private mines and to provide financial support for mining development to ensure stable procurement of industrial raw materials. The Company also provides financial support to quarriers to strengthen the competitiveness of the quarrying industry and extend financial support for quarrying development to induce the environmentally-friendly development of construction raw materials. The table below sets forth the basic terms for domestic resources development funds.

Term	Mining Fund	Quarrying Fund
Borrower	Mine Operator	Quarrier
Use of Proceeds	Facility-related	Facility-related
	Operation	Operation
Lending Period	4-8 years	4-8 years
Collateral	Mining concession	Processing facilities
	Mining facilities	Real estate
	Real estate	
Source of Fund	KORES capital from government contribution	KORES capital from government contribution

The Company's lending rate is based on the sum of the three-year sovereign bond rate of Korea, which was 3.0% as of December 31, 2016, and a spread that varies depending on the credit quality of the borrower and various other factors that are analyzed by the Company.

As of December 31, 2016, the Company's ten largest domestic lending exposures totaled Won 170.8 billion and accounted for 65.2% of the Company's total outstanding domestic loans. The following table sets forth, as of December 31, 2016, the Company's total exposures to these top ten borrowers.

Borrower	Outstanding (in billions of Won)	% of Total Outstanding Overseas Loans
Sampyo Resources Development Co., Ltd.	₩ 23.9	9.1%
Ssangyong Cement Industry Co., Ltd.	23.7	9.0
Tong Yang Cement Corp.	21.7	8.3
Kyungdong Co., Ltd.	18.5	7.1
Daesung Mining Development Inc.	16.5	6.3
Choongmoo Chemical Co., Ltd.	15.5	5.9
Tae Young EMC Co., Ltd.	13.8	5.3
GMC Co., Ltd.	13.0	5.0
Wooryong Co., Ltd.	12.6	4.8
Handuk Iron Mine Co., Ltd.	11.6	4.4
Total	₩170.8	65.2%

Non-Performing Loans

Non-performing loans are defined as loans that are past due by 90 days or more. These loans are generally classified as "substandard" or below. As of December 31, 2016, the Company's five largest non-performing loans accounted for 93.7% of the Company's total non-performing loan portfolio. The following table sets forth, as of December 31, 2016, certain information regarding the Company's five largest non-performing loans.

Borrower	Gross Principal Outstanding (in billions of Won)	% of Total Non-Performing Loans
Borrower A	₩0.8	29.7%
Borrower B	0.6	22.2
Borrower C	0.5	19.4
Borrower D	0.4	13.7
Borrower E	0.2	8.7
Total	₩2.5	93.7%

Loans are charged off if they are deemed to be uncollectible by falling under any of the following categories:

- loans for which collection is not foreseeable due to insolvency, bankruptcy, compulsory execution, disorganization, dissolution or the shutting down of the business of the debtor;
- loans for which collection is not foreseeable due to the death or disappearance of the debtor;
- loans for which expenses of collection exceed the collectable amount; and
- loans on which collection is not possible through legal or any other means.

One of the Company's primary objectives with respect to its lending operation is to prevent its loans from becoming non-performing. The Company attempts to minimize loans to be charged off by adhering to a sound credit approval process based on credit risk analyses prior to extending loans and a systematic management of outstanding loans. In addition, there is a limit on the maximum amount of loans that may be lent by the Company to a single borrower or in connection with a single project. Generally, with respect to overseas lending, a borrower may borrow up to 50% of the entire project investment amount. With respect to domestic lending, different criteria apply depending on the need for funding. For example, the maximum amount that may be lent to a borrower financing its working capital is determined based on the borrower's sales revenues, whereas the maximum amount that may be lent to a borrower financing its capital expenditures is determined based on the reasonable capital expenditure amount. Borrowers are generally required to pledge collateral.

Strategic Stockpiling

The Company has a long-term strategic mandate to secure a stable supply of ten rare minerals that have been selected in consultation with the Government from those minerals that are used as industrial raw materials and are strategically important to the growth of the Korean economy but whose global supply is largely dependent upon the top five producing and exporting nations. They currently consist of chrome, molybdenum, antimony, titanium, tungsten, niobium, selenium, rare earth, gallium and zirconium. In 2014, the Company stockpiled an aggregate amount of 57,614 tons of these ten minerals, and added an additional 17,131 tons in 2015 and 3,150 tons in 2016 to the stockpile. In December 2016, the Company reached the Government's stockpiling target of 77,895 tons of these ten minerals, which is equivalent to the estimated domestic consumption of such minerals for 64.5 days. The Company is currently formulating plans to make excess stockpile available to Korean companies on a commercial basis.

The Company leases four stockpiling facilities located in Gunsan, Jeollabuk-do from the Public Procurement Service of Korea. The aggregate stockpiling capacity of the four leased facilities is 80,800 tons.

Support Services

The Company provides various services to Korean companies engaged in domestic and overseas mining exploration, such as training and education, research and analysis, drilling, boring and other technical services designed to promote the mining industry. Certain of such services are subsidized by Government grants and provided by the Company at no cost. Other services are provided by the Company for a fee.

Mining Exploration Services

The Company supports domestic mining exploration companies in its mining and exploration efforts to increase the overall supply of mineral resources in Korea. Its support services include:

- conducting technical feasibility studies of the mining site and quantifying proven and probable reserves;

- conducting detailed site surveys of potential mineral reserve sites, and producing mining evaluations as well as geology and reserve valuations; and

- estimating the quality and quantity of reserves through drilling and boring, assessing hydrogeology and developing conceptual mine exploration plans.

Mine Safety Training and Equipment Purchase

The Company provides mine safety training and education programs on safety procedures to Korean corporations. The Company also subsidizes the purchase of mine safety equipment by domestic companies. The Company has provided mine safety training and education to over 370,000 people since its incorporation in 1967. The Company expects to continue to provide mining safety-related training and education programs to employees of Korean corporations engaged in mining exploration.

Overseas Information Gathering and Analysis

Due to Korea's heavy dependence on mineral resources, efficient and accurate collection of information related to the global mineral resources market is essential to Korea's ability to promptly respond to international market developments. In furtherance of its position as the execution arm of Korea's mineral resources-related policies and operations, the Company also engages in the collection, compilation, analysis and publication of domestic and international mineral resources-related information. The information provided by the Company is used widely not only in the mineral resources industry, but also in the decision-making process for mineral resources policies by the Government. The Company is currently certified by the Government to provide the official domestic mineral resources usage and pricing data.

The Company currently publishes mineral resource-related information through the following media:

Publication Title	Content	Medium	Language
Company website (www.kores.or.kr)	Multimedia Internet website with comprehensive mineral resources information, including a comprehensive database on Korean mineral resource-related information. Free subscriptions are available.	Internet	Korean/ English
Korea Mineral Resources Information Service (www.kores.net)	Multimedia Internet website with news and developments, price trends, bidding information, and various legislative developments and statistical information related to mineral resources. Free subscriptions are available.	Printed/ Internet	Korean
Korea Mineral Resource GIS (www.kmrgis.net)	Multimedia Internet website with geographical information related to mineral resources, including a comprehensive database of reports on geological and geographical information of mines and deposits throughout Korea. Both paid and free subscriptions are available.	Printed/ Internet	Korean

Properties

The Company's headquarters and principal offices are located at 199 Hyeoksin-ro, Wonju-si, Gangwon-do 26464, Korea. The Company has title over its branch office in Taebaek and its human resources development center in Iksan.

Environment, Health and Safety Matters

The Company is subject to numerous international, national, regional and local environmental laws and regulations concerning its natural resources exploration and production operations, stockpiling operation and other activities. In particular, these laws and regulations:

- require an environmental evaluation report to be submitted and approved prior to the commencement of exploration, development and production activities;
- restrict the type, quantities and concentration of various substances that can be released into the environment in connection with drilling and production activities;
- limit or prohibit drilling activities on certain lands lying within protected areas and certain other areas; and
- impose penalties for pollution resulting from mineral resources operations, including criminal and civil liabilities for serious pollution.

These laws and regulations may also restrict air emissions and discharge to surface and subsurface water resulting from the operation of mineral resources processing plants, pipeline systems and other facilities that the Company and its joint venture partners own or operate. In addition, the Company's operations may be subject to laws and regulations relating to the generation, handling, storage, transportation, disposal and treatment of waste materials. Moreover, since exploration and production activities may take place on sites that are ecologically sensitive (tropical forest, marine environment, etc.), each site may require a specific approach to minimize the impact on the related ecosystem, biodiversity and human health.

International and national commitments to reduce greenhouse gas emissions and counteract climate change may lead to increased costs for the Company. Carbon tax proposals in various jurisdictions as well as consumer preference changes in response to growing concerns of climate change could stimulate the emergence of alternative technologies and renewable energy availability, which may impact demand for oil and gas while increasing corporate expenses. The Company's coal mining activities in Australia could be particularly affected by international and national carbon emissions reduction targets, taxes, and other carbon emissions oriented regulations.

The Company anticipates that the environmental laws and regulations to which it is subject will become increasingly strict and therefore likely to have an increasing impact on its operations. It is impossible, however, to predict accurately the effect of future developments in such laws and regulations on the Company's future earnings and operations. Some risk of environmental costs and liabilities is inherent in certain of the Company's operations and products, as it is with other companies engaged in similar businesses, and there can be no assurance that material costs and liabilities will not be incurred. The Company does not currently expect any material adverse effect on its financial conditions or results of operations as a result of compliance with such laws and regulations. In addition to complying with laws, regulations and standards to which the Company is subject, it is the Company's policy to exercise maximum due care with respect to environmental matters in the course of its operations, and to maintain adequate insurance coverage. The Company invests in companies that operate in accordance with both locally and internationally accepted standards of good environmental and social practice.

The Company also conducts regular environmental checks on its operations and facilities by a third-party consultant, to identify any potential areas of problem and to assess ways of improving its compliance with environmental laws.

Insurance

The Company's operations are subject to hazards and risks inherent in the drilling, production and storage of mineral products. Insurance against certain of these risks with respect to the Company's overseas direct investment operations is typically maintained by the operator of the project, and the Company typically does not itself maintain any insurance against any of these risks.

The Company maintains fire insurance policies with respect to its headquarters. In addition, the Company maintains fire and gas accident liability insurance policies, automobile insurance policies, directors' and officers' liability insurance and travel insurance policies. The Company incurred an aggregate of Won 25.0 million in insurance premiums in 2014, Won 18.4 million in 2015 and Won 3,847.9 million in 2016. The increase in insurance premium in 2016 was largely due to the cost of insuring MMB's processing plant, which came into operation in 2016. The Company is not delinquent on any of its insurance payments. The Company does not anticipate having any significant difficulties in renewing any of its material insurance policies and considers its insurance coverage to be adequate and consistent with other companies engaged in similar businesses.

Employees

As of December 31, 2016, the Company had 525 regular employees and 27 contract employees. The following table describes the total number of employees by department as of the date indicated.

Department	As of December 31, 2016
Strategic Management Division	80
Business Support Division	103
Overseas Resource Division	117
Resource Based Division	118
Audit Office	11
Others	123
Total	552

All of the Company's eligible employees are members of its labor union. The Company negotiates a collective bargaining agreement every two years as well as a wage agreement on an annual basis with its labor union. The latest collective bargaining agreement came into effect in December 2015 for a two-year term. The collective bargaining agreement is automatically renewed every two years unless a proposal for the revision of the agreement is submitted 45 days in advance of the expiration of the latest collective bargaining agreement. The collective bargaining agreement provides for, among other things, various employment benefits, the scope of union activities and negotiation procedures. The Company has not experienced any strikes, work stoppages, labor disputes or actions which affected the operation of any of the Company's businesses, and the Company considers its relations with its workforce to be generally good.

The Company last entered into a wage agreement with its labor union in March 2015. The Company, like most Korean companies, grants annual increases in basic wages and pays periodic bonuses. Increases in the average wage (excluding retirement and severance benefits and other employee benefits) amounted to approximately 1.6% in 2014, 3.8% in 2015 and 3.0% in 2016. As an incentive, discretionary bonuses are paid to employees on a periodic basis depending on their and the Company's performance. The Company also provides a wide range of fringe benefits to its full-time as well as contract employees, including medical insurance, workers compensation and periodic medical examinations. The Company also provides loans to certain of its directors and employees pursuant to its internal policy in order to allow them to obtain housing and to stabilize livelihood. As of December 31, 2016, the Company had provided such loans in the aggregate amount of Won 28.8 billion to its directors and employees.

In accordance with the National Pension Act of Korea, the Company contributes an amount equal to 4.5% of an employee's standard monthly wages, and each employee contributes 4.5% of his or her standard monthly wages, into his or her personal pension account. The Company's employees, including executive officers as well as non-executive employees, are subject to a pension insurance system, under which the Company makes monthly contributions to the pension accounts of the employees, and upon retirement, such employees are paid from their pension accounts. Prior to October 2010, executive and non-executive employees of the Company were subject to a lump-sum severance payment system, under which they were entitled to receive a lump-sum severance payment upon termination of their employment, based on their length of service and salary level at the time of termination. Starting in October 2010, in accordance with the Korean Employee Retirement Income Security Act, the Company replaced such lump-sum severance payment system with its current pension insurance system in the form of either a defined benefit plan or a defined contribution plan. The Company's employees have the option of choosing either the defined benefit plan or the defined contribution plan. Lump-sum severance amounts previously accrued prior to the adoption of the current pension insurance system by the Company continue to remain payable.

Research and Development

In November 1977, the Company opened its Technology Research Institute at its headquarters. Since January 2016, the Technology Research Institute became part of the Company's Resource Based Division. As of December 31, 2016, the Company employed 127 researchers (consisting of 20 researchers with doctorate degrees and 107 researchers with master's degrees). The Company incurred research and development costs of approximately Won 1.9 billion in 2014, Won 1.3 billion in 2015 and Won 1.1 billion in 2016.

The Company's overall strategy with respect to research and development is to develop technologies that (i) are likely to be utilized by its activities and help generate revenues or increase its operating efficiencies, (ii) will help revitalize the domestic mining industry, (iii) are environmentally friendly and (iv) provide the Company with a competitive advantage in its mineral resources exploration, development and production activities.

Current core projects focus on the development of technology for practical application in the Company's direct investment operation, the reduction in production costs and enhancement of mineral separation processes and other production technologies. In particular, an emphasis is placed on identifying and securing core technologies that the Company can utilize on site as the operator of a project rather than solely as an equity investor.

The Company had 22 patents as of December 31, 2016. The Company does not believe that any individual property right or related group of intellectual property rights is of such importance that its expiration or termination would materially affect the business of the Company.

Legal Matters

The Company is involved from time to time in legal proceedings and governmental investigations arising in the ordinary course of its business, including claims and pending actions against the Company seeking damages or clarification of legal rights and regulatory inquiries regarding business practices. Other than as disclosed below and in "Risk Factors — The Company's business may be materially and adversely affected by legal claims and regulatory actions against us." and "Risk Factors – The Company may be exposed to potential claims made by current or previous employees for unpaid wages and may also incur increased labor costs as a result of the expansion of the scope of ordinary wages," the Company is not a party to any legal or administrative proceedings and no proceedings are known by the Company to be contemplated by governmental authorities or third parties, which, if adversely determined, may have a material adverse effect on the Company's results of operations or financial condition.

Consolidated Subsidiaries and Affiliates

The Company operates its business globally through a number of overseas subsidiaries. As of December 31, 2016, the Company had nine direct consolidated subsidiaries operating in as many countries outside Korea. The Company's consolidated subsidiaries are mainly engaged in the management of the Company's overseas investment projects located in the same region as the subsidiary as well as the gathering and analysis of regional mineral resources information. The Company also employs its subsidiaries to explore new investment opportunities overseas.

The following table sets forth certain information relating to the Company's consolidated subsidiaries as of December 31, 2016.

	As of or for the year ended December 31, 2016					
Name	**Country[1]**	**Percentage Ownership**	**Total Assets**	**Total Liabilities**	**Sales**	**Profit (Loss) for the Year**
		(in billions of Won, except for percentages)				
KORES Australia Pty. Ltd.	Australia	100.00%	₩ 283.8	₩ 40.2	₩46.4	₩ 1.8
KORES CANADA Corp.	Canada	100.00	274.5	90.1	0.0	(79.0)
Minera CoroCobre S.A.	Bolivia	52.64	1.2	0.1	—	0.0
Sarisbury Limited	Niger	80.00	0.0	—	—	—
Stonebridge Trading 36 (Proprietary) Ltd.	South Africa	100.00	0.1	0.0	—	0.0
Prime Asia Resources	Singapore	100.00	32.1	2.2	—	0.0
Ermani Ltd.	Tanzania	100.00	—	—	—	—
KORES Lux S.a.r.l[2]	Luxembourg	100.00	1,180.2	1,718.1	1.9	(681.1)

Notes:

(1) Indicates the country of incorporation and/or operation.

(2) As of December 31, 2016, KORES Lux S.a.r.l owned 42.47% of MMB directly and an additional 17.53% of MMB indirectly through its wholly-owned subsidiary, KORES Boleo Lux S.a.r.l. The Company owned the remaining 14.00% of its 74% equity interest in MMB through Korean Boleo Corporation, S.A.de C.V., a consortium of Korean investors.

As of December 31, 2016, the Company had 22 affiliates. The following table sets forth certain information relating to the Company's affiliates as of December 31, 2016.

Name	As of or for the year ended December 31, 2016					
	Country[(1)]	Percentage Ownership	Total Assets	Total Liabilities	Sales	Profit (Loss) for the Year
		(in billions of Won, except for percentages)				
GMC	Korea	45.04%	₩ 0.3	₩ 0.0	₩ —	₩ (0.1)
YoungWoo Resources Co., Ltd.	Korea	43.53	13.9	9.5	5.8	(1.5)
Enerchem	Korea	42.50	39.0	21.7	0.1	(2.5)
Xian Maxun KORES New Material Co., Ltd.	China	49.00	28.0	11.6	9.6	(3.8)
Zhangjiagang Wonjin-KORES Industrial Material Co., Ltd.	China	49.00	14.6	8.1	15.8	0.2
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Co., Ltd.	China	49.00	18.9	9.9	17.2	0.2
Zhangjiagang Anhuisung Layong	China	25.00	3.4	0.8	3.6	0.1
Anhuisheng Wonjin Jinyuan Calcium Industry Co., Ltd.	China	25.00	6.9	2.0	3.8	(0.3)
POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	China	48.33	21.3	58.4	1.7	(2.9)
Ambatovy	Madagascar	22.50	6,570.2	4,842.6	603.7	(520.3)
Korean Boleo Corp.	Mexico	46.92	384.6	139.8	—	(138.1)
United Copper & Moly LLC	U.S.A.	50.00	80.9	0.0	—	(0.1)
Sal de Vida Korea Corporation	Korea	33.33	0.8	0.0	—	0.5
Philco Resources Limited	Malaysia	40.00	0.9	0.0	0.0	(0.0)
K.K. Lao Mining Company	Laos	50.00	0.1	0.0	—	(0.5)
Haein Resource Corporation	Korea	49.00	3.8	20.8	0.3	(1.3)
KPMC	Panama	50.00	1,157.1	696.0	0.6	0.6
Capstone	Canada	10.58	1,875.6	671.1	532.0	(40.0)
KCMC	Canada	30.00	701.9	7.5	—	(2.2)
Springvale SK Kores Pty Ltd.	Australia	50.00	419.9	205.8	110.8	(2.3)
Mkuze	Tanzania	28.00	0.0	0.0	—	—
PT. KCT	Indonesia	24.00	16.8	0.7	—	(0.4)

Note:

(1) Indicates the country of incorporation and/or operation.

Management

The Company's articles of incorporation currently provide for a board of directors of nine directors, consisting of four standing directors (including the president of the Company who also serves as the chief executive officer of the Company, and the standing member of the audit committee of the Company) and five non-standing directors as the Act on the Management of Public Agencies requires that more than half of the directors must be non-standing directors. All non-standing directors are independent. The directors have terms of two years, with the exception of the president of the Company, whose term is for three years. The activities within the discretion of the board of directors are subject to applicable Korean laws, including the Act on the Management of Public Agencies and the KORES Act, as well as the Company's articles of incorporation and its internal regulations, and include establishing the budget, issuing debentures and amending the Company's articles of incorporation when necessary.

The president of the Company is deemed to have the capacity of a representative director where the Korean Commercial Code applies and thus administers most of the day-to-day business that is not specifically designated as a responsibility of the board of directors. The Company's president must enter into a management contract with the Company pursuant to which the Company's president must meet a certain minimum level of performance each year. Under the current management contract with the Company's president and the articles of incorporation of the Company, if the board of directors of the Company determines that the president's ability to perform its duties have been seriously impaired (due to reasons such as the president's violation of applicable laws or the Company's articles of incorporation, or the president's failure to diligently perform its duties), the board of directors may pass a resolution to propose dismissal of the Company's president to the Minister of Trade, Industry and Energy.

Under the KORES Act, the Act on the Management of Public Agencies and the articles of incorporation of the Company, the president is nominated by the Company's Officer and Executive Recommendation Committee. The Officer and Executive Recommendation Committee recommends a pool of candidates, which is then deliberated by the Public Agencies Management Committee established pursuant to the Act on the Management of Public Agencies. After such deliberations, the Company's president is appointed by the Minister of Trade, Industry and Energy.

Standing directors who are members of the audit committee of the Company are nominated by the Minister of Strategy and Finance and appointed and removed by the President of Korea. The standing directors assist the president and serve as executive officers of the Company. The non-standing directors are appointed and removed by the Minister of Strategy and Finance, after being selected by the Public Agencies Management Committee from a pool of candidates recommended by the Officer and Executive Recommendation Committee. Any standing directors that are not members of the audit committee are appointed by the Company's president. Each director is responsible for reviewing the proposed agenda and participating in the voting process.

Pursuant to the articles of incorporation of the Company or, if applicable, as mandated by applicable laws, the board of directors may establish by resolution committees to facilitate its efficient operation in carrying out various management functions. The Officer and Executive Recommendation Committee has been established pursuant to applicable laws. As permitted by law in Korea, the Company's board of directors does not currently maintain a remuneration committee.

The articles of incorporation of the Company require that the board of directors of the Company establish the audit committee and such audit committee be composed of three or more directors, and that not less than two-thirds of the audit committee consist of non-standing directors. At least one of the audit committee members must be an accounting or financial expert as defined under Article 37(2) of the Presidential Decree of the Commercial Code of Korea. Under the articles of incorporation of the Company, the audit committee has the duty to review the accounting records and business affairs of the Company.

The Officer and Executive Recommendation Committee is responsible for the selection and recommendation of candidates to serve as the president or as non-standing directors of the Company. The Officer and Executive Recommendation Committee is composed of non-standing directors and private citizens appointed by the board of directors. The Company's articles of incorporation provide for the Officer and Executive Recommendation Committee of five to nine members, more than half of whom must be non-standing directors.

The directors' address is 199 Hyeoksin-ro, Wonju-si, Gangwon-do 26464, Korea. Summary biographical information regarding the Company's directors is set out below.

Name	Age	Title	Outside Occupation	Position Held Since
Kim, Young-Min	58	Standing Director, President and Chief Executive Officer	None	November 24, 2015
Kim, Hyun Jang	67	Auditor General	Member of the Presidential Committee for National Cohesion; Member of the Commission for Democratization Movement Activists' Honor-Restoration and Compensation	March 17, 2016
Lee, Jung Ki	57	Standing Director, Head of Strategic Management Division	None	March 11, 2016
Lee, Mu Young	56	Standing Director, Head of Business Development Division	None	March 18, 2016
Chung, Dong Soo	61	Non-Standing Director	Adviser at the law firm of Yulchon LLC	April 9, 2014
Choi, Byung Man	62	Non-Standing Director	None	April 9, 2014
Han, Myung Kyung	66	Non-Standing Director	None	December 22, 2014
Park, Won Kwan	62	Non-Standing Director	None	August 3, 2016
Kim, Choon Seon	62	Non-Standing Director	Visiting professor, Inha University	January 2, 2017

Kim, Young-Min has served as president, chief executive officer and a standing director of the Company since November 2015. Mr. Kim previously served as the commissioner of the Korea Intellectual Property Office and as the director general of the Trade Policy and Cooperation Bureau at the Ministry of Trade, Industry and Energy (formerly Ministry of Knowledge Economy). He holds a bachelor's degree in public administration from Kyungpook National University and a master's degree in policy economics from the University of Wisconsin-Madison.

Kim, Hyun Jang has served as the auditor general of the Company since March 2016. Mr. Kim currently serves as a member of the Presidential Committee for National Cohesion and as a member of the Commission for Democratization Movement Activists' Honor-Restoration and Compensation. He previously served as a standing member of the National Unification Advisory Council and as a member of the Presidential Transition Committee. Mr. Kim holds a bachelor's degree in metallurgical material engineering from Chosun University.

Lee, Jung Ki has served as a standing director since March 2016. Mr. Lee currently serves as the head of the Strategic Management Division of the Company. He previously served as the head of the HR & Management Division and as the head of KORES Australia Pty. Ltd. Mr. Lee holds a bachelor's degree in business administration from Soongsil University and a master's degree in business administration from Yonsei University.

Lee, Mu Young has served as a standing director since March 2016. Mr. Lee currently serves as the head of the Overseas Resource Division of the Company. He previously served as the head of the Business Support Division and as the head of the Energy Department of the Company. Mr. Lee holds a bachelor's degree in geology from Seoul National University.

Chung, Dong Soo has served as a non-standing director since April 2014. Mr. Chung currently serves as a senior foreign counsel at the law firm of Yulchon LLC. Mr. Chung previously served as the head of Invest KOREA at the Korea Trade-Investment Promotion Agency (KOTRA) and as an executive officer of Maxon Telecom. Mr. Chung holds a bachelor's degree in sociology from Harvard University, a master's degree in public affairs from the Woodrow Wilson School of Public and International Affairs, Princeton University, and a juris doctor degree from UCLA School of Law.

Choi, Byung Man has served as a non-standing director since April 2014. Mr. Choi previously served as the head of Emergency Planning Team at the Board of Audit and Inspection of Korea and as a manager of the Development and Management Department at the Computer Center of the Republic of Korea Army. Mr. Choi holds a bachelor's degree in military science from the Korea Military Academy, a bachelor's degree in business administration from Korea University and a master's degree in information processing from Sogang University.

Han, Myung Kyung has served as a non-standing director since December 2014. Mr. Han previously served as an adviser to the National Unification Advisory Council and as the representative director of Kumwon Industrial Co, Ltd and Samnam Corporation. Mr. Han holds a bachelor's degree in polymer engineering from Hanyang University.

Park, Won Kwan has served as a non-standing director since August 2016. Mr. Park previously served as a standing audit committee member of Korea Railroad Corporation, chief secretary of the Presidential Committee for the Investigation of Pro-Japanese and Anti-national Acts, member of the National Assembly Policy Research Committee and policy director of the Grand National Party. Mr. Park holds a bachelor's degree in law from Sungkyunkwan University.

Kim, Choon Seon has served as a non-standing director since January 2017. Mr. Kim is currently a visiting professor at the Asia Pacific School of Logistics of Inha University. Mr. Kim previously served as president of the Incheon Port Authority, executive director of Korea Student Aid Foundation and head of port logistics of the Ministry of Land, Transport and Maritime Affairs. Mr. Kim holds a bachelor's degree in geography from Seoul National University, a master's degree in economics from Manchester University and a doctorate degree in urban planning from Gachon University.

Compensation of Directors and Executive Officers

The aggregate remuneration paid and benefits in kind granted to the Company's directors and executive officers was Won 0.5 billion in 2016. As of December 31, 2016, loans granted by the Company to its directors and executive officers amounted to Won 29 million.

GUARANTEED ISSUERS

A subsidiary of the Company may become a Guaranteed Issuer by executing an accession agreement pursuant to the terms of the Agency Agreement. By executing the accession agreement, such subsidiary agrees to be bound by all the terms of the Program.

REGULATION

The Company was established as a statutory juridical entity under the KORES Act and is subject to the rules and regulations of the KORES Act. The Company is also subject to all general rules and regulations applicable to corporations under the Commercial Code of Korea and the Act on the Management of Public Agencies, unless otherwise provided for in the KORES Act.

The KORES Act

Under the KORES Act, the Company was established as a statutory juridical entity for the purpose of improving the performance of businesses engaged in the development of domestic and overseas mineral resources, and promoting and supporting Korea's mineral resources business in general. In order to achieve these objectives, the KORES Act allows the Company to undertake, among others, the following activities:

- Exploration and development of mineral resources (including overseas mineral resources and deep seafloor mineral resources), stone and aggregate resources, and investigation, research, technology support, evaluation of business value and mineral experiment for such exploration and development;

- Financing (including guarantee of debt and discounting of bills) for mining businesses, stone and aggregate industries, refinement of mineral resources and stockpiling of mineral products;

- Stockpiling of mineral products;

- Trade, arrangement, export and import, and rent of the devices, the machines and the facilities for the development of mineral products and mineral, stone and aggregate resources;

- Training, technology support and provision of devices for mine securities;

- Management of mines; and

- Investment in corporations (including foreign entities) performing research and development of mineral, stone and aggregate resources and the related businesses.

The Company's authorized capital is Won 2 trillion which is to be funded solely by the Government. Under the KORES Act, the Minister of Trade, Industry and Energy is granted the power to direct and supervise the Company's activities relating to its business.

In addition, the Company may issue bonds for its business to the extent not exceeding 200% of the sum of the Company's capital and reserve, by a resolution of its board of directors in accordance with the KORES Act. The Government may guarantee the repayment of the principal and interest amount of the Company's bonds, and provide subsidies in respect of the Company's business activities. However, the Notes are not guaranteed by the Government.

The Company's annual net losses for each fiscal year shall be debited to the business extension reserve funds. If such business extension reserve funds are not sufficient, such remaining losses shall be debited to the earned surplus reserve funds. If the earned surplus reserve funds are not sufficient, the Government may assume the remaining losses.

Overseas Resources Development Business Act

Under the Overseas Resources Development Business Act, the development of overseas resources may be conducted in one of the following manners:

- a Korean national developing overseas resources individually or jointly with foreigners (including development through local companies established overseas);
- a Korean national providing technical services to foreigners that are developing overseas resources; or
- a Korean national providing funding to foreigners that are developing overseas resources and importing all or part of the overseas resources they develop.

The Government must establish and execute a master plan for the development of overseas resources. If a Korean national desires to operate an overseas mineral resources development business, such person must report the plan for overseas resources development to the Minister of Trade, Industry and Energy.

The Government may provide funds to an overseas resource developer to conduct the necessary research and analysis for starting an overseas resources development business and to acquire the right to develop such resources. The Government may also provide funds for the installation and operation of facilities required for an overseas resources development business, and funds for leasing or buying land necessary to conduct an overseas resources development business.

If the stability and normal functioning of the national economy are harmed or feared to be harmed when a serious disruption to the supply and demand of resources occurs due to an imbalance of supply and demand of resources in Korea and abroad, or there are concerns over such occurrence, the Minister of Trade, Industry and Energy may order overseas resources developers to bring to Korea the whole or part of the overseas resources developed by such developer under appropriate and reasonable terms and conditions to stabilize the supply and demand of resources, and the overseas resources developers subject to such an order must comply with the order in the absence of special circumstances.

The Company has been delegated by the Minister of Trade, Industry and Energy to inspect or investigate matters necessary for the operation of overseas mineral resources development businesses.

Submarine Mineral Resources Development Act

The Submarine Mineral Resources Development Act aims to contribute to the growth of the Korean industry by developing, in a reasonable manner, submarine resources in (i) the Korean peninsula, (ii) the ocean adjacent to the coastlines of islands belonging to Korea, and (iii) the continental shelf under Korea's control to the greatest extent possible. Submarine mining rights are the rights authorized by the Minister of Trade, Industry and Energy to explore, gather and acquire submarine resources from submarine resource areas owned by Korea, and such rights are categorized into exploration rights and production rights. The exploration rights cannot be granted for a period greater than 10 years from the date of the issuance unless there are special circumstances. The production rights cannot be granted for a period exceeding 30 years from the date of the issuance unless there are special circumstances. This period may be extended by up to two times of maximum 5 years each, pursuant to the authorization by the Minister of Trade, Industry and Energy. A holder of a submarine mining right must pay a mining fee to the Minister of Trade, Industry and Energy in accordance with the standard stipulated in the Presidential Decree when producing submarine resources in the submarine resource areas.

Mining Industry Act

Under the Mining Industry Act, no one can explore and gather mineral resources without mining rights authorized by the Government. Mining rights consist of (i) exploration rights and (ii) production rights. While the period of exploration rights shall not exceed seven years, the period of production rights shall not exceed 20 years and can be extended under the authorization of the Minister of Trade, Industry and Energy within a 20 year period at each time of such extension. A holder of an exploration right should file a report on the exploration plan to the Minister of Trade, Industry and Energy within one year from the registration date of the exploration right. A holder of a production right should file a report on the production plan prior to commencing production of mineral resources and obtain permission from the Minister of Trade, Industry and Energy. A person who causes losses to another person during the course of exploration and gathering of mineral resources shall compensate for damages arising therefrom. However, the right to claim damages lapses by prescription if it is not exercised within three years commencing from the date on which the injured party becomes aware of such damages and the identity of the person who caused it or ten years have elapsed from the date on which the damages have occurred.

Energy Act

Under the Energy Act, the Government prescribes and enforces energy policies and energy related plans to ensure a stable, efficient and environmentally-friendly structure of energy supply. Energy consumers are expected to comply with such policies, as well as, cooperating with the Government to maximize the safety, efficiency and environmental friendliness in the production, conversion, delivery, storage and use of energy. The relevant minister can recommend energy related businesses to invest in for the purpose of developing energy technology.

Legislation Relating to the Operation and Management of the Company

Act on the Management of Public Agencies

The KORES Act prescribes that the affairs regarding the Company's structure and management must be governed by the Act on the Management of Public Agencies. Under the Act on the Management of Public Agencies, the Company is required to publicly disclose many aspects of its affairs including, among others, the objectives of management, its budget and business plan, its financial statements and supplementary documents, status of personnel including directors and officers, its articles of incorporation, its bond register, its internal regulations and the minutes of the board of directors (but confidential information on the management provided for in the minutes of board of directors need not be disclosed to the public) and the audit report of its Audit Committee. Full-time officers and employees may not be engaged in activities having purposes of commercial advantage. The Company's fiscal year must be the same as the Korean government's fiscal year. The Company must present mid- to long-term management objectives covering five fiscal years to the Minister of Trade, Industry and Energy and the Minister of Strategy and Finance on an annual basis. The Company may be audited by the Board of Audit and Inspection of Korea based on its business activities and accounting.

The SAER Act

The SAER Act has been enacted to implement certain special accounts for energy and resources-related projects so as to manage demand and supply of energy, stabilize prices and efficiently promote resources-related projects. The SAER Act is managed and supervised by the Minister of Trade, Industry and Energy. Those accounts may be categorized into investment accounts and loan accounts.

Revenue from the investment account is composed of surcharges and additional charges arising out of the energy and resources related laws, including, but not limited to, the Petroleum and Petroleum Substitute Fuel Business Act, the Urban Gas Business Act and the Mining Industry Act. Expenditure from the investment account is composed of operating expenses needed for energy and resources related businesses and contributions or subsidies for such businesses as well as contributions or investments to institutions or groups engaged in the energy and resources-related businesses.

Revenue from the loan account is composed of income from the principal and interest amount arising out of the loan amount. Expenditure is composed of loans to the subject institutions to support energy and resources-related businesses.

If there are insufficient funds to meet the expenditure, long term loans may be arranged within the limits set by the resolution of the National Assembly. Temporary loans may also be arranged if there is a temporary shortage of funds, provided that repayment on the principal amount of the temporary loan must be made within the relevant accounting year. Any expenditure not made within the relevant accounting year may be carried over to the following accounting year notwithstanding any provisions in the State Finance Act.

Regulations on Contractual Business of Public Enterprises and Semi-Government Institutions

Contracts entered into by the Company must conform to the Regulations on Contractual Business of Public Enterprises and Semi-Governmental Institutions (the "Regulations on Contractual Business") determined by the Ministry of Strategy and Finance in accordance with the Act on the Management of Public Agencies. According to the Regulations on Contractual Business, if it is deemed necessary for the business characteristics of public enterprises and semi-government entities or for fairness and transparency, or if there are any other inevitable reasons, a standard or procedure different from those set forth in the Regulations on Contractual Business may be newly established with the approval of the Minister of Strategy and Finance. For those matters not specified in the Regulations on Contractual Business, the laws relating to contracts entered into by the Government will be applied. In principle, contracts must be made through open bids, but if it is deemed necessary, nominated competitive bids or private contracts may also be made.

Environmental Legislation

Atmosphere Preservation Act

The purpose of the Atmosphere Preservation Act is to allow Korean citizens to live in a healthy and comfortable environment by preventing potential danger or injury to public health or environment arising from air pollution and managing and preserving the atmosphere in a proper and sustainable manner. The Atmosphere Preservation Act provides for the Ministry of Environment to determine standards for the sulphur content of fuel. The Ministry of Environment can determine the supply area and range of facilities to use the respective fuels and may in some circumstances prohibit or restrict the production, sale or use of certain fuels. According to the Atmosphere Preservation Act, the Minister of Environment or mayor or provincial governor may prohibit the use of fuels other than gaseous fuel such as liquefied natural gas and liquefied petroleum gas which release relatively smaller amounts of pollutants in an area or facility designated by the Enforcement Decree of the Atmosphere Preservation Act as a place where these permitted fuels should be used, regardless of the restriction measures on the use of fuel under the Atmosphere Preservation Act.

Water Quality and Ecosystem Conservation Act

The purpose of the Water Quality and Ecosystem Conservation Act is to prevent people's health and environment from being exposed to harm and danger caused by water pollution and to properly manage and preserve water quality and aquatic ecosystems of the public waters, including rivers, lakes and marshes, to enable people to enjoy and inherit benefits from such measures. Under the Water Quality and Ecosystem Conservation Act, anyone who intends to undertake (i) businesses in the development of underwater mining under the Submarine Mineral Resources Development Act which have the objective of energy development, (ii) businesses in the mining industry under the Mining Industry Act having the objective of energy development (limited to those equal to or exceeding 300 square kilometers of mining area) and (iii) any other certain stone or aggregate mining businesses that are subject to the River Act, the Management of Mountainous District Act, Mining Industry Act and the Aggregate Picking Act shall report to the Minister of Environment. In cases where a company of such report on installment of non-point pollution source intends to operate a business or install and operate facilities, such company must observe following matters:

- The company must execute the contents of the reduction plan for non-point pollution;

- The company must operate the reduction facilities for non-point pollution; and

- Other matters prescribed by Ordinance of the Ministry of Environment in order to properly manage non-point pollutants.

The Minister of Environment may issue and order for the company that has failed to observe such matters to implement a reduction plan for non-point pollution or to install or improve reduction facilities for non-point pollution.

Soil Environment Conservation Act

The purpose of the Soil Environment Conservation Act is to conserve the soil ecosystem, increase the value of the soil as resources to allow all Korean citizens to enjoy healthy and comfortable lives by preventing potential danger or injury to public health and the environment due to soil contamination and by properly maintaining and preserving soil, including by restoring contaminated soil.

The level of soil contamination is determined by the Ordinance of the Ministry of Environment. A person who causes soil contamination must, where any damages occur due to such soil contamination, compensate for the damages caused and restore the contaminated soil. In the event that two or more persons cause soil contamination, and it is impossible to determine which one has caused the damages, each of them must jointly and severally compensate for such damages and restore the contaminated soil.

If anyone who produces, transports, stores, handles, processes or treats soil contaminants discharges or leaks them in the process, such person must report such fact without delay to the competent administrative agency. The competent administrative agency that receives such a report may survey the cause and the level of soil contamination. If the competent administrative agency determines that the soil has been contaminated, then the person who causes such soil contamination may be ordered to restore the contaminated soil and, if such order is not complied with, such person will become subject to criminal liabilities.

Environmental Impact Assessment Act

The purpose of the Environmental Impact Assessment Act is to promote the environmentally friendly and sustainable development of business and the healthy and comfortable lives of Korean citizens by assessing in advance the impact on the environment of the business which is subject to the environmental impact assessment and letting an environment preservation plan be prepared when the business plan is established and implemented. Anyone who desires to operate a business that is subject to the environmental impact assessment must prepare such assessment which will be reviewed by the Minister of Environment. The Minister of Environment may supplement or adjust the business plan according to its review.

To avoid damage to the environment from the operation of a business, its impact on the environment must be investigated according to the assessment items agreed in advance and the result must be notified to the approval institution or the Minister of Environment (the "Post Investigation of Impact on the Environment"). An energy development business and a mineral resources, stone and aggregate mining business are businesses that are subject to the environmental impact assessment and the Post Investigation of Impact on the Environment. Among other things, the following businesses are subject to the environmental impact assessment and the Post Investigation of Impact on the Environment:

- Businesses in the development of underwater mining under the Submarine Mineral Resources Development Act which have the objectives of energy development;

- Businesses in the mining industry under the Mining Industry Act having the objectives of energy development (limited to those equal to or exceeding 300,000 square meters of mining area); and

- Any other stone or aggregate mining businesses that are subject to the River Act, the Management of Mountainous District Act, the Mining Industry Act and the Aggregate Picking Act.

TAXATION

United States Taxation

The following is a summary of certain United States federal income tax considerations that may be relevant to a holder of a Note that is a citizen or resident of the United States or a domestic corporation or that otherwise is subject to United States federal income taxation on a net income basis in respect of the Note (a "United States holder"). This summary is based on laws, regulations, rulings and decisions now in effect, all of which are subject to change, possibly with retroactive effect. This summary deals only with United States holders that will hold Notes as capital assets, and does not address tax considerations applicable to investors that may be subject to special tax rules, such as banks, tax-exempt entities, insurance companies, dealers in securities or currencies, traders in securities electing to mark to market, partnerships and partners therein, persons that will hold Notes as a position in a "straddle" or conversion transaction, or as part of a "synthetic security" or other integrated financial transaction or persons that have a "functional currency" other than the U.S. dollar. This discussion applies only to Notes that are classified as indebtedness for U.S. federal income tax purposes (the applicable Pricing Supplement will identify Notes that are not classified as indebtedness for U.S. federal income tax purposes). This discussion does not address special tax considerations that may be raised by Notes that are issued by the Guaranteed Issuers (any such special tax considerations relevant to Notes issued by a Guaranteed Issuer will be discussed in the applicable Pricing Supplement). In addition, this summary deals only with the ownership and disposition of Registered Notes, and does not address Bearer Notes, which generally may not be offered or sold in the United States. Further, this summary does not address the alternative minimum tax, the Medicare tax on net investment income or other aspects of U.S. federal income or state and local taxation that may be relevant to a holder in light of such holder's particular circumstances. Finally, this discussion does not apply to every type of Registered Note that may be issued under the Program, including certain Floating Rate Notes, Dual Currency Notes, Index Linked Notes and Notes denominated in a currency other than the U.S. dollar. In particular, this discussion does not address the tax consequences of any Notes that are treated under applicable Treasury regulations as providing for contingent payments and subject to special rules thereunder. Any special United States federal income tax considerations relevant to a particular issue of Notes, including any Index Linked Notes, will be provided in the applicable Pricing Supplement.

Investors should consult their own tax advisers in determining the tax consequences to them of holding the Notes, including the application to their particular situation of the United States federal income tax considerations discussed below, as well as the application of state, local, foreign or other tax laws.

Payments of Interest. Payments of the gross amount of any "qualified stated interest" (as defined below under "Original Issue Discount") and any additional amounts (*i.e*., without reduction for any Korean tax withheld from payments of interest on a Note), but excluding any pre-issuance accrued interest, will be taxable to a United States holder as ordinary interest income at the time that such payments are accrued or are received (in accordance with the United States holder's method of tax accounting).

If such payments of interest are made with respect to a note denominated in a currency other than the U.S. dollar (a "Foreign Currency Note"), the amount of interest income realized by a United States holder that uses the cash method of tax accounting will be the U.S. dollar value of the Specified Currency payment based on the exchange rate in effect on the date of receipt regardless of whether the payment in fact is converted into U.S. dollars. A United States holder that uses the accrual method of accounting for tax purposes will accrue interest income on the Note in the relevant foreign currency and translate the amount accrued into U.S. dollars based on the average exchange rate in effect during the interest accrual period (or portion thereof within the United States holder's taxable year), or, at the accrual basis United States holder's election, at the spot rate of exchange on the last day of the accrual period (or the last day of the taxable year within such accrual period if the accrual period spans more than one taxable year), or at the spot rate of exchange on the date of receipt, if such date is within five business days of the last day of the accrual period. A United States holder that makes such election must apply it consistently to all debt instruments from year to year and cannot change the election without the consent of the Internal Revenue Service (the "IRS"). A United States holder that uses the accrual method of accounting for tax purposes will recognize foreign currency gain or loss, as the case may be, on the receipt of an interest payment made with respect to a Foreign Currency Note if the exchange rate in effect on the date the payment is received differs from the rate applicable to a previous accrual of that interest income. This foreign currency gain or loss will be treated as ordinary income or loss but generally will not be treated as an adjustment to interest income received on the Note.

Korean withholding taxes paid at the appropriate rate applicable to the United States holder will be treated as foreign income taxes eligible for credit against such United States holder's U.S. federal income tax liability, subject to generally applicable limitations and conditions, or, at the election of such United States holder, for deduction in computing such United States holder's taxable income (provided that the United States holder elects to deduct, rather than credit, all foreign income taxes paid or accrued for the relevant taxable year). Interest and additional amounts will constitute income from sources without the United States for U.S. foreign tax credit purposes. The calculation of foreign tax credits and, in the case of a United States holder that elects to deduct foreign taxes, the availability of deductions, involves the application of complex rules that depend on a United States holder's particular circumstances. United States holders should consult their own tax advisors regarding the availability of foreign tax credits and the treatment of additional amounts.

Purchase, Sale and Retirement of Notes. A United States holder's tax basis in a Note generally will equal the cost of such Note to such holder, increased by any amounts includible in income by the holder as "OID" (as defined below) and market discount and reduced by any amortized premium (each as described below) and any payments other than payments of "qualified stated interest" (as defined below) made on such Note. In the case of a Foreign Currency Note, the cost of such Note to a United States holder will be the U.S. dollar value of the foreign currency purchase price on the date of purchase calculated at the exchange rate in effect on that date. In the case of a Foreign Currency Note that is traded on an established securities market, a cash basis United States holder (and, if it so elects, an accrual basis United States holder) will determine the U.S. dollar value of the cost of such Note by translating the amount paid at the spot rate of exchange on the settlement date of the purchase. The amount of any subsequent adjustments to a United States holder's tax basis in a Note in respect of OID, market discount and premium denominated in a Specified Currency will be determined in the manner described under "— Original Issue Discount" and "— Premium and Market Discount" below. The conversion of U.S. dollars to a Specified Currency and the immediate use of the Specified Currency to purchase a Foreign Currency Note generally will not result in taxable gain or loss for a United States holder.

Upon the sale, exchange or retirement of a Note, a United States holder generally will recognize gain or loss equal to the difference between the amount realized on the sale, exchange or retirement (less any accrued qualified stated interest, which will be taxable as such) and the United States holder's tax basis in such Note. If the United States holder receives property (other than cash) in respect of the sale, exchange or retirement of a Note, the amount realized will be the fair market value of such property at the time of such sale, exchange or retirement. If a United States holder receives a currency other than the U.S. dollar in respect of the sale, exchange or retirement of a Note, the amount realized will be the U.S. dollar value of the Specified Currency received calculated at the exchange rate in effect on the date the instrument is disposed of or retired. In the case of a Foreign Currency Note that is traded on an established securities market, a cash basis United States holder, and if it so elects, an accrual basis United States holder, will determine the U.S. dollar value of the amount realized by translating such amount at the spot rate on the settlement date of the sale. The election available to accrual basis United States holders in respect of the purchase and sale of Foreign Currency Notes traded on an established securities market, discussed above, must be applied consistently to all debt instruments from year to year and cannot be changed without the consent of the IRS.

Except as discussed below with respect to market discount, Short-Term Notes (as defined below) and foreign currency gain or loss, gain or loss recognized by a United States holder generally will be long-term capital gain or loss if the United States holder has held the Note for more than one year at the time of disposition. Long-term capital gains recognized by an individual holder generally are subject to tax at a lower rate than short-term capital gains or ordinary income. The deduction of capital losses is subject to limitations.

Gain or loss recognized by a United States holder on the sale, exchange or retirement of a Foreign Currency Note generally will be treated as ordinary income or loss to the extent that the gain or loss is attributable to changes in exchange rates during the period in which the holder held such Note. This foreign currency gain or loss will not be treated as an adjustment to interest income received on the Notes.

Original Issue Discount. United States holders of Notes generally will be subject to the special tax accounting rules for obligations issued with original issue discount ("OID," and such Notes "OID Notes") provided by the Internal Revenue Code of 1986, as amended (the "Code"), and certain regulations promulgated thereunder (the "OID Regulations"). United States holders of such Notes should be aware that, as described in greater detail below, they generally must include OID in ordinary gross income for U.S. federal income tax purposes as it accrues, in advance of the receipt of cash attributable to that income.

In general, each United States holder of an OID Note, whether such holder uses the cash or the accrual method of tax accounting, will be required to include in ordinary gross income the sum of the "daily portions" of OID on the Note for all days during the taxable year that the United States holder owns the Note. The daily portions of OID on an OID Note are determined by allocating to each day in any accrual period a ratable portion of the OID allocable to that accrual period. Accrual periods may be any length and may vary in length over the term of an OID Note, provided that no accrual period is longer than one year and each scheduled payment of principal or interest occurs on either the final day or the first day of an accrual period. In the case of an initial holder, the amount of OID on an OID Note allocable to each accrual period is determined by (a) multiplying the "adjusted issue price" (as defined below) of the OID Note at the beginning of the accrual period by the "yield to maturity" (as defined below) of such OID Note (appropriately adjusted to reflect the length of the accrual period) and (b) subtracting from that product the amount (if any) of qualified stated interest (as defined below) allocable to that accrual period. If the total amount of OID on a Note calculated pursuant to the preceding sentence is less than the product of (a) 0.25% of the Note's "stated redemption price at maturity" (generally, the sum of all payments on the Note other than payments of qualified stated interest) and (b) the number of complete years to the Note's maturity, the Note will be treated as having no OID. The "yield to maturity" of a Note is the discount rate that causes the present value of all payments on the Note as of its original issue date to equal the issue price of such Note. The "adjusted issue price" of an OID Note at the beginning of any accrual period will generally be the sum of its issue price (generally including accrued interest, if any) and the amount of OID allocable to all prior accrual periods, reduced by the amount of all payments other than payments of qualified stated interest (if any) made with respect to such Note in all prior accrual periods. The term "qualified stated interest" generally means stated interest that is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually during the entire term of an OID Note at a single fixed rate of interest or, subject to certain conditions, based on one or more interest indices. In the case of an OID Note that is a Floating Rate Note qualifying as a "variable rate debt instrument" (as discussed below), both the "yield to maturity" and "qualified stated interest" will generally be determined for these purposes as though the OID Note will bear interest in all periods at a fixed rate generally equal to the rate that would be applicable to the interest payments on the Note on its date of issue or, in the case of certain Floating Rate Notes, the rate that reflects the yield that is reasonably expected for the Note. (Additional rules may apply if interest on a Floating Rate Note is based on more than one interest index.) As a result of this "constant yield" method of including OID in income, the amounts includible in income by a United States holder in respect of an OID Note denominated in U.S. dollars generally are lesser in the early years and greater in the later years than the amounts that would be includible on a straight-line basis.

A United States holder generally may make an irrevocable election to include in its income its entire return on a Note (i.e., the excess of all remaining payments to be received on the Note, including payments of qualified stated interest, over the amount paid by such United States holder for such Note) under the constant-yield method described above. For Notes purchased at a premium or bearing market discount in the hands of the United States holder, the United States holder making such election will also be deemed to have made the election (discussed below in "Premium and Market Discount") to amortize premium or to accrue market discount in income currently on a constant-yield basis in respect of all other premium or market discount bonds that it holds.

In the case of an OID Note that is also a Foreign Currency Note, a United States holder should determine the U.S. dollar amount includible in income as OID for each accrual period by (a) calculating the amount of OID allocable to each accrual period in the Specified Currency using the constant-yield method described above, and (b) translating the amount of the Specified Currency so derived at the average exchange rate in effect during that accrual period (or portion thereof within a United States holder's taxable year) or, at the United States holder's election (as described above under "— Payments of Interest"), at the spot rate of exchange on the last day of the accrual period (or the last day of the taxable year within such accrual period if the accrual period spans more than one taxable year), or at the spot rate of exchange on the date of receipt, if such date is within five business days of the last day of the accrual period. Because exchange rates may fluctuate, a United States holder of an OID Note that is also a Foreign Currency Note may recognize a different amount of OID income in each accrual period than would the holder of an otherwise similar OID Note denominated in U.S. dollars. All payments on an OID Note (other than payments of qualified stated interest) will generally be viewed first as payments of previously-accrued OID (to the extent thereof), with payments attributed first to the earliest-accrued OID, and then as payments of principal. Upon the receipt of an amount attributable to OID (whether in connection with a payment of an amount that is not qualified stated interest or the sale or retirement of the OID Note), a United States holder will recognize ordinary income or loss measured by the difference between the amount received (translated into U.S. dollars at the exchange rate in effect on the date of receipt or on the date of disposition of the OID Note, as the case may be) and the amount accrued (using the exchange rate applicable to such previous accrual).

A subsequent United States holder of an OID Note that purchases the Note at a cost less than its remaining redemption amount (as defined below), or an initial United States holder that purchases an OID Note at a price other than the Note's "issue price" (the first price at which a substantial amount of the Notes is sold to the public (*i.e.*, excluding sales of the Notes to underwriters, placement agents, wholesalers, or similar persons)), also generally will be required to include in gross income the daily portions of OID, calculated as described above. However, if the United States holder acquires the OID Note at a price greater than its adjusted issue price, such holder is required to reduce its periodic inclusions of OID income to reflect the premium paid over the adjusted issue price. The "remaining redemption amount" for a Note is the total of all future payments to be made on the Note other than payments of qualified stated interest.

Floating Rate Notes generally will be treated as "variable rate debt instruments" under the OID Regulations. Accordingly, the stated interest on a Floating Rate Note generally will be treated as qualified stated interest and such a Note will not have OID solely as a result of the fact that it provides for interest at a variable rate. If a Floating Rate Note does not qualify as a "variable rate debt instrument," such Note generally will be subject to special rules (the "Contingent Payment Regulations") that govern the tax treatment of debt obligations that provide for contingent payments ("Contingent Debt Obligations"). A detailed description of the tax considerations relevant to United States holders of any such Notes will be provided in the applicable Pricing Supplement.

Certain of the Notes may be subject to special redemption, repayment or interest rate reset features, as indicated in the applicable Pricing Supplement. Notes containing such features, in particular OID Notes, may be subject to special rules that differ from the general rules discussed above. Purchasers of Notes with such features should carefully examine the applicable Pricing Supplement and should consult their own tax advisers with respect to such Notes since the tax consequences with respect to such features, and especially with respect to OID, will depend, in part, on the particular terms of the purchased Notes.

Premium and Market Discount. A United States holder of a Note that purchases the Note at a cost greater than its remaining redemption amount (as defined in the third preceding paragraph) will be considered to have purchased the Note at a premium, and may elect to amortize such premium (as an offset to interest income), using a constant-yield method, over the remaining term of the Note. Such election, once made, generally applies to all bonds held or subsequently acquired by the United States holder on or after the first taxable year to which the election applies and may not be revoked without the consent of the IRS. A United States holder that elects to amortize such premium must reduce its tax basis in a Note by the amount of the premium amortized during its holding period. OID Notes purchased at a premium will not be subject to the OID rules described above. With respect to a United States holder that does not elect to amortize bond premium, the amount of bond premium will be included in the United States holder's tax basis when the Note matures or is disposed of by the United States holder. Therefore, a United States holder that does not elect to amortize such premium and that holds the Note to maturity generally will be required to treat the premium as capital loss when the Note matures.

In the case of premium in respect of a Foreign Currency Note, a United States holder should calculate the amortization of such premium in the Specified Currency. Amortization deductions attributable to a period reduce interest payments in respect of that period and therefore are translated into U.S. dollars at the exchange rate used by the United States holder for such interest payments. Exchange gain or loss will be realized with respect to amortized bond premium on such a Note based on the difference between the exchange rate on the date or dates such premium is recovered through interest payments on the Note and the exchange rate on the date on which the United States holder acquired the Note.

If a United States holder of a Note purchases a Note, other than a Short-Term Note, at a price that is lower than its remaining redemption amount, or in the case of an OID Note, its adjusted issue price, by at least 0.25% of its remaining redemption amount multiplied by the number of remaining whole years to maturity, the Note will be considered to have "market discount" in the hands of such United States holder. In such case, gain realized by the United States holder on the disposition of the Note generally will be treated as ordinary income to the extent of the market discount that accrued on the Note while held by such United States holder. In addition, the United States holder could be required to defer the deduction of a portion of the interest paid on any indebtedness incurred or maintained to purchase or carry the Note. In general terms, market discount on a Note will be treated as accruing ratably over the term of such Note, or, at the election of the holder, under a constant-yield method. Market discount on a Foreign Currency Note will be accrued by a United States holder in the Specified Currency. The amount includible in income by a United States holder in respect of such accrued market discount will be the U.S. dollar value of the amount accrued, generally calculated at the exchange rate in effect on the date that the Note is disposed of by the United States holder.

A United States holder may elect to include market discount in income on a current basis as it accrues (on either a ratable or constant-yield basis), in lieu of treating a portion of any gain realized on a sale of a Note as ordinary income. If a United States holder elects to include market discount on a current basis, the interest deduction deferral rule described above will not apply. Any accrued market discount on a Foreign Currency Note that is currently includible in income will be translated into U.S. dollars at the average exchange rate for the accrual period (or portion thereof within the United States holder's taxable year). Any such election, if made, applies to all market discount bonds acquired by the taxpayer on or after the first day of the first taxable year to which such election applies and is revocable only with the consent of the IRS.

Short-Term Notes. The rules set forth above will also generally apply to Notes having maturities of not more than one year ("Short-Term Notes"), but with certain modifications.

First, the OID Regulations treat none of the interest on a Short-Term Note as qualified stated interest. Thus, all Short-Term Notes will be OID Notes. OID will be treated as accruing on a Short-Term Note ratably, or at the election of a United States holder, under a constant-yield method.

Second, a United States holder of a Short-Term Note that uses the cash method of tax accounting and is not a bank, securities dealer, regulated investment company or common trust fund, and does not identify the Short-Term Note as part of a hedging transaction, will generally not be required to include OID in income on a current basis. Such a United States holder may not be allowed to deduct all of the interest paid or accrued on any indebtedness incurred or maintained to purchase or carry such Note until the maturity of the Note or its earlier disposition in a taxable transaction. In addition, such a United States holder will be required to treat any gain realized on a sale, exchange or retirement of the Note as ordinary income to the extent such gain does not exceed the OID accrued with respect to the Note during the period the United States holder held the Note, and as short-term capital gain to the extent the gain exceeds accrued OID. Notwithstanding the foregoing, a cash-basis United States holder of a Short-Term Note may elect to accrue OID on a current basis (in which case the limitation on the deductibility of interest described above will not apply). A United States holder using the accrual method of tax accounting and certain cash-basis United States holders (including banks, securities dealers, regulated investment companies and common trust funds) generally will be required to include OID on a Short-Term Note in income on a current basis.

Third, any United States holder (whether cash or accrual basis) of a Short-Term Note can elect to accrue the "acquisition discount," if any, with respect to the Note on a current basis. If such an election is made, the OID rules will not apply to the Note. Acquisition discount is the excess of the remaining redemption amount of the Note at the time of acquisition over the purchase price. Acquisition discount will be treated as accruing ratably or, at the election of the United States holder, under a constant-yield method based on daily compounding.

Finally, the market discount rules will not apply to a Short-Term Note.

Index Linked Notes and Other Notes Providing for Contingent Payments. The Contingent Payment Regulations, which govern the tax treatment of Contingent Debt Obligations, generally require accrual of interest income on a constant-yield basis in respect of such obligations at a yield determined at the time of their issuance, and may require adjustments to such accruals when any contingent payments are made. A detailed description of the tax considerations relevant to United States holders of any contingent debt obligations will be provided in the applicable Pricing Supplement.

Information Reporting and Backup Withholding. The Paying Agent will be required to file information returns with the IRS with respect to payments made to certain United States persons that hold the Notes. In addition, certain United States persons may be subject to backup withholding tax in respect of such payments if they do not provide their taxpayer identification numbers to the Paying Agent. Non-United States persons may be required to comply with applicable certification procedures to establish that they are not United States persons in order to avoid the application of such information reporting requirements and backup withholding tax. Any amounts withheld under the backup withholding rules will be allowed as a credit against the holder's U.S. federal income tax liability, if any, or as a refund, provided the required information is timely furnished to the IRS.

Information with Respect to Foreign Financial Assets. Individual United States holders that own "specified foreign financial assets" with an aggregate value in excess of U.S.$50,000 are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. "Specified foreign financial assets" include any financial accounts held at a non-United States financial institution, as well as securities issued by a non-United States issuer (which would include Notes issued by the Company) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. United States holders who fail to report the required information could be subject to substantial penalties. Prospective investors should consult their own tax advisers concerning the application of these rules to their investment in Notes, including the application of the rules to their particular circumstances.

Reportable Transactions. A United States taxpayer that participates in a "reportable transaction" will be required to disclose its participation to the IRS. Under the relevant rules, a United States holder may be required to treat a foreign currency exchange loss relating to a Foreign Currency Note as a reportable transaction if the loss exceeds the relevant threshold in the regulations (U.S.$50,000 in a single taxable year, if the United States holder is an individual or trust, or higher amounts for other non-individual United States holders), and to disclose its investment by filing Form 8886 with the IRS. Prospective purchasers are urged to consult their tax advisers regarding the application of these rules.

Korean Taxation

The information provided below does not purport to be a complete summary of currently applicable Korean tax law and practice. Prospective investors who are in any doubt as to their tax position should consult with their own professional advisers.

The taxation of non-resident individuals and non-Korean corporations ("Non-Residents") depends on whether they have a "permanent establishment" (as defined under Korean law and applicable tax treaties) in Korea to which the relevant Korean source income is attributable or with which such income is effectively connected. Non-Residents without a permanent establishment in Korea are taxed in the manner described below. Non-Residents with permanent establishments in Korea are taxed in accordance with different rules.

Tax on Interest

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

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

The tax rates may be reduced or exempted by an applicable tax treaty, convention or agreement between Korea and the residence country of the recipient of the income. The relevant tax treaties are discussed below.

In addition, in order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder must submit an application for the reduced rate to the party liable for the withholding before the receipt of the relevant interest payment (if there is no change in the contents of such application, the Non-Resident holder is not required to submit such application again within 3 years thereafter), together with evidence of tax residence (including a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident holder's resident country). If the Non-Resident holder was unable to receive the benefit of a reduced rate due to his or her failure to timely submit the aforementioned application, the Non-Resident holder may still receive a tax return if a claim for tax return is made within 5 years thereafter. If interest is paid to an overseas investment vehicle, the overseas investment vehicle (subject to certain exceptions) must obtain an application for the reduced rate from the beneficial owner of the interest and submit a report of overseas investment vehicle, together with a schedule of beneficial owners, in order to benefit from the reduced rate available under the applicable tax treaties. An "overseas investment vehicle" is defined as an organization established in a foreign jurisdiction that (i) manages funds collected through investment solicitation by way of acquiring, disposing or otherwise investing in proprietary targets and (ii) subsequently distributes the proceeds of such management to investors.

Furthermore, in order to obtain the benefit of a tax exemption available under applicable tax treaties, a Non-Resident holder of the interest should submit to the party responsible for withholding taxes an application for exemption (if there is no change in the contents of such application, it is not required to submit such application again within 3 years thereafter), together with a certificate of the tax residence issued by a competent authority of the Non-Resident holder's residence country. The party responsible for withholding tax on payments of interest is required to submit the application for exemption to its district tax office no later than the ninth day of the month following the month in which the interest is paid. If the Non-resident holder was unable to receive the benefit of such exemption due to his or her failure to timely submit the aforementioned application, the Non-Resident holder may still receive a tax refund if a claim for tax refund is made within 5 years thereafter. Subject to certain exceptions, the Korean tax laws also require an overseas investment vehicle to obtain an application for exemption from the beneficial owner, together with a certificate of tax residence of the beneficial owner, and submit a report of overseas investment vehicle, together with a schedule of beneficial owners and its beneficial owners' application for exemption, to avail itself of the exemption available under the applicable tax treaties. However, this requirement does not apply to exemptions under Korean tax law.

Tax on Capital Gains

Korean tax laws currently exclude from Korean taxation gains made by a Non-Resident without a permanent establishment in Korea from the sale of the Notes to other Non-Residents (other than to their permanent establishments in Korea). In addition, capital gains earned by a Non-Resident from a transfer taking place outside Korea of the Notes are currently exempt from taxation by virtue of STTCL, provided that the issuance of the Notes is in the form of foreign currency denominated bonds and deemed to be an overseas issuance under the STTCL.

If the exclusion or exemption from Korean taxation referred to above were to cease to be in effect, in the absence of an applicable treaty reducing or eliminating tax on capital gains, the applicable rate of tax would be the lower of 11% (including local income tax) of the gross realization proceeds or (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Note) 22% (including local income tax) of the realized gain (i.e., the excess of the gross realization proceeds over the acquisition cost and certain direct transaction costs) made. If such evidence shows that no gain (or a loss) was made on the sale, no Korean tax is payable. There is no provision under relevant Korean law to allow offsetting of gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of Notes issued by Korean corporations. The purchaser or any other designated withholding agent of Notes is obliged under Korean law to withhold the applicable amount of Korean tax and make payment thereof to the relevant Korean tax authority. Unless the seller can claim the benefit of an exemption from tax under an applicable tax treaty or on the failure of the seller to produce satisfactory evidence of his acquisition cost and certain direct transaction costs in relation to the instruments being sold, the purchaser or such withholding agent must withhold an amount equal to 11% of the gross realization proceeds. Any amounts withheld by the purchaser or such withholding agent must be paid to the competent Korean tax office. The purchaser or withholding agent must pay any withholding tax no later than the tenth day of the month following the month in which the payment for the purchase of the relevant instruments occurred. Failure to transmit the withheld tax to the Korean tax authorities in time subjects the purchaser or such withholding agent to penalties under Korean tax laws. The Korean tax authorities may attempt to collect such tax from a Non-Resident who is liable for payment of any Korean tax on gains, as a purchaser or withholding agent who is obliged to withhold such tax, through proceedings against payments due to the Non-Resident from its Korean investments and the assets or revenues of any of the Non-Resident's branch or representative offices in Korea.

In order to obtain the benefit of a tax exemption available under applicable tax treaties, a Non-Resident seller should submit to the party responsible for withholding taxes an application for exemption (if there is no change in the contents of such application, it is not required to submit such application again within 3 years thereafter), together with a certificate of the tax residence issued by a competent authority of the Non-Resident seller's country of residence. The party responsible for withholding tax on gains is required to submit the application for exemption to its district tax office no later than the ninth day of the month following the month in which sale proceeds are paid. If the Non-Resident seller was unable to receive the benefit of such exemption due to his or her failure to timely submit the aforementioned application, the Non-Resident seller may still receive a tax refund if a claim for tax refund is made within 3 years thereafter. Subject to certain exceptions, the Korean tax laws also require an overseas investment vehicle to obtain an application for exemption from the beneficial owner, together with a certificate of tax residence of the beneficial owner, and submit a report of overseas investment vehicle, together with a schedule of beneficial owners and its beneficial owners' application for exemption, in order to avail itself of the exemption available under the applicable tax treaties. However, this requirement does not apply to exemptions under Korean tax law.

Inheritance Tax and Gift Tax

Korean inheritance tax is imposed upon (a) all assets (wherever located) of the deceased if at the time of his death he was domiciled in Korea or had resided in Korea continuously for at least 183 days immediately prior to his death and (b) all property located in Korea that passes on death (irrespective of the domicile or residence of the deceased). Gift tax is imposed in similar circumstances to the above. The taxes are imposed if the value of the relevant property is above a certain limit and the rate varies from 10% to 50%. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under the Korean inheritance and gift tax laws, bonds issued by Korean corporations are deemed to be located in Korea irrespective of where they are physically located or by whom they are owned, and, consequently, the Korean inheritance and gift taxes will be imposed on transfers of the Notes by inheritance or gift. Prospective purchasers should consult their personal tax advisers regarding the consequences of the imposition of the Korean inheritance or gift tax.

Stamp Duty and Securities Transaction Tax

No stamp, issue or registration duties will be payable in Korea by the holders of the Notes in connection with the issue of the Notes except for a nominal amount of stamp duty on certain documents executed in Korea which will be paid by the Company. No securities transaction tax will be imposed upon the transfer of the Notes.

Tax Treaties

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

A special withholding tax system took effect on July 1, 2006. Under the system, there is a special procedure to apply the Korea-Malaysia tax treaty on certain Korean source income. Payments made to the residents of Labuan, Malaysia will be subject to the default Korean withholding tax rates (generally 15.4% for interest and the lower of 11% of gross realization proceeds or 22% of capital gains (including local income tax)) rather than the reduced or exempted rate available under the Korea-Malaysia tax treaty. A Labuan taxpayer, however, will be given an opportunity to obtain a refund by proving within 5 years that it is entitled to the tax treaty benefits as a beneficial owner of the income and is an actual resident of Labuan, Malaysia. A Labuan taxpayer may also file an application with the National Tax Service (the "NTS") for confirmation that it is entitled to the tax treaty benefits and obtain an advance confirmation from the NTS prior to receiving Korean source income.

Withholding and Gross Up

As mentioned above, interest on the Notes is exempt from any withholding or deduction on account of income tax or corporation tax pursuant to STTCL. However, in the event that the payer or the Company is required by law to make any withholding or deduction for or on account of any Korean taxes (as more fully described in "Terms and Conditions of the Notes — Taxation") the Company has agreed to pay (subject to the customary exceptions as set out in "Terms and Conditions of the Notes — Taxation") such additional amounts as may be necessary in order that the net amounts received by the holder of any Note after such withholding or deduction shall equal the respective amounts which would have been received by such holder in the absence of such withholding or deduction.

United Kingdom Provision of Information Requirements

The comments below are of a general nature and are based on current United Kingdom ("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 below deal only with UK rules relating to information that may need to be provided to HMRC in connection with the Notes. They do not deal with any other UK tax consequences of acquiring, owning or disposing of the Notes. Each prospective investor should seek advice based on its particular circumstances from an independent tax adviser.

Information relating to the Notes may be required to be provided to HMRC in certain circumstances pursuant to certain domestic and international reporting and transparency regimes. This may include (but is not limited to) information relating to the value of the Notes, amounts paid or credited with respect to the Notes, details of the holders or the beneficial owners of the Notes (or the persons for whom the Notes are held), details of the persons who exercise control over entities that are, or are treated as, holders of the Notes, details of the persons to whom payments derived from the Notes are or may be paid and information and documents in connection with transactions relating to the Notes. Information may be required to be provided by, amongst others, the Issuer, the holders of the Notes, persons by or through whom payments derived from the Notes 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 Notes on behalf of others and certain registrars or administrators. Accordingly, in order to enable these requirements to be met, holders of the Notes may be required to provide information to the Issuer or to other persons. In certain circumstances, the information obtained by HMRC may be exchanged with tax authorities in other countries.

The Proposed Financial Transactions Tax

The European Commission has published a proposal (the “Commission’s Proposal”) for a Directive for a common financial transactions tax (“FTT”) in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia 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 Notes 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 Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, “established” in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

The FTT remains subject to negotiation between 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 Notes are advised to seek their own professional advice in relation to the FTT.

CERTAIN ERISA CONSIDERATIONS

The following is a summary of certain considerations associated with the purchase of the Notes by employee benefit plans that are subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), plans, individual retirement accounts and other arrangements that are subject to Section 4975 of the Code or provisions under any other federal, state, local, non-U.S. or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "Similar Laws"), and entities whose underlying assets are considered to include "plan assets" of any such plan, account or arrangement (each, a "Plan").

ERISA and the Code impose certain duties on persons who are fiduciaries of a Plan subject to Part 4 of Title I of ERISA or Section 4975 of the Code (an "ERISA Plan") and prohibit certain transactions involving the assets of an ERISA Plan and its fiduciaries or other interested parties. Under ERISA and the Code, any person who exercises any discretionary authority or control over the administration of such an ERISA Plan or the management or disposition of the assets of such an ERISA Plan, or who renders investment advice for a fee or other compensation to such an ERISA Plan, is generally considered to be a fiduciary of the ERISA Plan.

In considering an investment in the Notes of a portion of the assets of any Plan, a fiduciary should determine whether the investment is in accordance with the documents and instruments governing the Plan and the applicable provisions of ERISA, the Code or any Similar Law relating to a fiduciary's duties to the Plan including, without limitation, the prudence, diversification, delegation of control and prohibited transaction provisions of ERISA, the Code and any other applicable Similar Laws. Section 406 of ERISA and Section 4975 of the Code prohibit ERISA Plans from engaging in certain transactions involving plan assets with persons who are "parties in interest," within the meaning of ERISA, or "disqualified persons," within the meaning of Section 4975 of the Code, with respect to the Plan, unless an exemption is available. Thus, a fiduciary considering a purchase of the Notes should also consider whether such an investment might constitute or give rise to a prohibited transaction under ERISA or the Code. For example, if the Issuer, a Guarantor, a Dealer or any of their respective affiliates were considered to be a "party in interest" within the meaning of ERISA, or a "disqualified person" within the meaning of the Code, the acquisition or holding of the Notes by or on behalf of the Plan could result in a prohibited transaction unless an exemption is available. A party in interest or disqualified person who engaged in a non-exempt prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and/or the Code. In addition, the fiduciary of the Plan that engaged in such a non-exempt prohibited transaction may be subject to penalties and liabilities under ERISA and/or the Code.

Certain exemptions from the prohibited transaction provisions of ERISA and the Code could be applicable, depending on the plan fiduciary who makes the decision on behalf of the Plan to purchase the Notes and the terms of the Notes. Among these exemptions are Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code, relating to transactions with certain service providers, Prohibited Transaction Class Exemption 90-1, relating to investments by insurance company pooled separate accounts, Prohibited Transaction Class Exemption 91-38, relating to investments by bank collective investment funds, Prohibited Transaction Class Exemption 84-14, relating to investments made by a "qualified professional asset manager," Prohibited Transaction Class Exemption 95-60 relating to investments by insurance company general accounts and Prohibited Transaction Class Exemption 96-23, relating to investments made by in-house asset managers, although there can be no assurance that all of the conditions of any such exemptions will be satisfied.

Because of the foregoing, each purchaser and subsequent transferee of Notes or any interest therein will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser or subsequent transferee to acquire or hold the Notes or any interest therein constitutes assets of any Plan or an employee benefit plan subject to provisions under any Similar Laws or (ii) the acquisition and holding of the Notes or any interest therein will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under any applicable Similar Law.

The foregoing discussion is general in nature and is not intended to be all-inclusive. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries, or other persons considering purchasing any Notes on behalf of, or with the assets of, any Plan, consult with their counsel regarding the matters described herein.

INDEPENDENT AUDITORS

The consolidated financial statements of the Company as of and for the years ended December 31, 2014, 2015 and 2016 contained in this Offering Circular have been prepared in accordance with Government Accounting Standards and have been audited by Ernst & Young Han Young, independent auditors, as stated in their report appearing herein.

SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

The Dealers have, in the amended and restated program agreement dated April 22, 2015, as further amended, supplemented and/or restated from time to time (the "Program Agreement"), agreed with the Issuer and the Guarantor a basis upon which they or any of them may from time to time agree to purchase Notes or, in the case of Definitive IAI Registered Notes, procure purchasers of Notes. Any such agreement will extend to those matters stated under "Form of the Notes" and "Terms and Conditions of the Notes" above. In the Program Agreement, the Company and the Guaranteed Issuers have agreed to reimburse the Dealers for certain of their expenses in connection with the establishment of the Program and the issue of Notes under the Program and to indemnify the Dealers against certain liabilities incurred by them in connection therewith.

In order to facilitate the offering of any Tranche of the Notes, certain persons participating in the offering of the Tranche may to the extent permitted by applicable laws and regulations engage in transactions that stabilize, maintain or otherwise affect the market price of the relevant Notes during and after the offering of the Tranche. Specifically, such persons may over-allot or create a short position in the Notes for their own account by selling more Notes than have been sold to them by the Issuer. Such persons may also elect to cover any such short position by purchasing Notes in the open market. In addition, such persons may stabilize or maintain the price of the Notes by bidding for or purchasing Notes in the open market and may impose penalty bids, under which selling concessions allowed to syndicate members or other broker-dealers participating in the offering of the Notes are reclaimed if Notes previously distributed in the offering are repurchased in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of the Notes at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of the Notes to the extent that it discourages resales thereof. No representation is made as to the magnitude or effect of any such stabilizing or other transactions. Such transactions, if commenced, may be discontinued at any time. Stabilization activities are subject to certain prescribed time limits in certain jurisdictions.

Certain Relationships

Certain of the Dealers and their affiliates may from time to time perform various investment banking, commercial banking or advisory services for the Issuer, the Guarantor and their respective affiliates, for which they have received and may in the future receive customary compensation. The Dealers or their affiliates may own securities issued by the Issuer or the Guarantor. The Dealers or their affiliates may purchase the Notes and be allocated Notes for asset management and/or proprietary purposes but not with a view to distribution.

The Dealers or their respective affiliates may purchase Notes for its or their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to Notes and/or other securities of the Issuer, the Guarantor or their respective subsidiaries or associates at the same time as the offer and sale of Notes or in secondary market transactions. Such transactions would be carried out as bilateral trades with selected counterparties and separately from any existing sale or resale of Notes to which this Offering Circular relates (notwithstanding that such selected counterparties may also be purchasers of Notes).

Transfer Restrictions

As a result of the following restrictions, purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale or other transfer of such Notes.

Each purchaser of Registered Notes (other than a person purchasing an interest in a Registered Global Note with a view to holding it in the form of an interest in the same Global Note) will be deemed to have acknowledged, represented and agreed as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S are used herein as defined therein):

(a) that either: (i) it is a QIB, purchasing (or holding) the Notes for its own account or for the account of one or more QIBs and it is aware that any sale to it is being made in reliance on Rule 144A or (ii) it is an

Institutional Accredited Investor, that, prior to its purchase of the Notes has delivered to the Registrar an IAI Investment Letter in the form as set forth below or (iii) it is outside the United States and is not a U.S. person;

(b) that the Notes are being offered and sold in a transaction not involving a public offering in the United States within the meaning of the Securities Act, and that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. state securities laws and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except as set forth below;

(c) that, unless it holds an interest in a Regulation S Global Note and either is a person located outside the United States or is not a U.S. person, if in the future it decides to resell, pledge or otherwise transfer the Notes or any beneficial interests in the Notes, it will do so, prior to the date which is one year after the later of the last Issue Date for the Series and the last date on which the Issuer or an affiliate of the Issuer was the owner of such Notes, only (i) to the Issuer or any affiliate thereof, (ii) inside the United States to a person whom the seller reasonably believes is a QIB purchasing for its own account or for the account of a QIB in a transaction meeting the requirements of Rule 144A, (iii) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act, (iv) pursuant to the exemption from registration provided by Rule 144 under the Securities Act (if available) or (v) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable U.S. state securities laws;

(d) it will, and will require each subsequent holder to, notify any purchaser of the Notes from it of the resale restrictions referred to in paragraph (c) above, if then applicable;

(e) that Notes initially offered in the United States to QIBs will be represented by one or more Rule 144A Global Notes, that Notes offered to Institutional Accredited Investors will be in the form of Definitive IAI Registered Notes and that Notes offered outside the United States in reliance on Regulation S will be represented by one or more Regulation S Global Notes;

(f) that the Notes, other than the Regulation S Global Notes, will bear a legend to the following effect unless otherwise agreed to by the Issuer and the Guarantor:

> "THIS SECURITY [AND THE RELATED GUARANTEE] HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (A) REPRESENTS THAT (I) IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) PURCHASING THIS SECURITY FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE QUALIFIED INSTITUTIONAL BUYERS OR (II) IT IS AN INSTITUTIONAL "ACCREDITED INVESTOR" (AS DEFINED IN RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT) (AN "INSTITUTIONAL ACCREDITED INVESTOR"); (B) AGREES THAT IT WILL NOT RESELL OR OTHERWISE TRANSFER THIS SECURITY EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND, PRIOR TO THE DATE WHICH IS ONE YEAR AFTER THE LATER OF THE LAST ISSUE DATE FOR THE SERIES AND THE LAST DATE ON WHICH THE ISSUER, [THE GUARANTOR] OR [ITS]/[THEIR RESPECTIVE] AFFILIATE[S] WAS THE OWNER OF SUCH SECURITIES OTHER THAN (I) TO THE ISSUER, [THE GUARANTOR] OR[ITS]/[THEIR RESPECTIVE] AFFILIATE[S], (II) INSIDE THE UNITED STATES TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN

ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (III) OUTSIDE THE UNITED STATES IN COMPLIANCE WITH RULE 903 OR RULE 904 UNDER THE SECURITIES ACT, (IV) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (V) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES AND ANY OTHER JURISDICTION; AND (C) IT AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS SECURITY IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND.

BY ITS ACQUISITION OF THIS SECURITY, THE HOLDER THEREOF WILL BE DEEMED TO HAVE REPRESENTED AND WARRANTED THAT EITHER (1) NO PORTION OF THE ASSETS USED BY SUCH HOLDER TO ACQUIRE OR HOLD THIS SECURITY CONSTITUTES THE ASSETS OF AN EMPLOYEE BENEFIT PLAN THAT IS SUBJECT TO TITLE I OF THE U.S. EMPLOYEE RETIREMENT INCOME SECURITY ACT OF 1974, AS AMENDED ("ERISA"), OF A PLAN, INDIVIDUAL RETIREMENT ACCOUNT OR OTHER ARRANGEMENT THAT IS SUBJECT TO SECTION 4975 OF THE U.S. INTERNAL REVENUE CODE OF 1986, AS AMENDED (THE "CODE"), OR PROVISIONS UNDER ANY OTHER FEDERAL, STATE, LOCAL, NON-U.S. OR OTHER LAWS OR REGULATIONS THAT ARE SIMILAR TO SUCH PROVISIONS OF ERISA OR THE CODE ("SIMILAR LAWS"), OR OF AN ENTITY WHOSE UNDERLYING ASSETS ARE CONSIDERED TO INCLUDE "PLAN ASSETS" OF ANY SUCH PLAN, ACCOUNT OR ARRANGEMENT, OR (2) THE ACQUISITION AND HOLDING OF THIS SECURITY WILL NOT CONSTITUTE A NON-EXEMPT PROHIBITED TRANSACTION UNDER SECTION 406 OF ERISA OR SECTION 4975 OF THE CODE OR A SIMILAR VIOLATION UNDER ANY APPLICABLE SIMILAR LAWS.

THIS SECURITY[, THE RELATED GUARANTEE] AND RELATED DOCUMENTATION (INCLUDING, WITHOUT LIMITATION, THE AGENCY AGREEMENT REFERRED TO HEREIN) MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME, WITHOUT THE CONSENT OF, BUT UPON NOTICE TO, THE HOLDERS OF THIS SECURITY SENT TO THEIR REGISTERED ADDRESSES, TO MODIFY THE RESTRICTIONS ON AND PROCEDURES FOR RESALES AND OTHER TRANSFERS OF THIS SECURITY TO REFLECT ANY CHANGE IN APPLICABLE LAW OR REGULATION (OR THE INTERPRETATION THEREOF) OR IN PRACTICES RELATING TO RESALES OR OTHER TRANSFERS OF RESTRICTED SECURITIES GENERALLY. THE HOLDER OF THIS SECURITY SHALL BE DEEMED, BY ITS ACCEPTANCE OR PURCHASE HEREOF, TO HAVE AGREED TO ANY SUCH AMENDMENT OR SUPPLEMENT (EACH OF WHICH SHALL BE CONCLUSIVE AND BINDING ON THE HOLDER HEREOF AND ALL FUTURE HOLDERS OF THIS SECURITY AND ANY SECURITIES ISSUED IN EXCHANGE OR SUBSTITUTION THEREFOR, WHETHER OR NOT ANY NOTATION THEREOF IS MADE HEREON).";

(g) that either (i) no portion of the assets used by it to acquire or hold the Notes constitutes assets of any employee benefit plan subject to Title I of ERISA, of any plan, account or other arrangement that is subject to Section 4975 of the Code, or provisions under any Similar Laws, or of an entity whose underlying assets are considered to include "plan assets" of any such plan, account or arrangement or (ii) the acquisition and holding of the Notes by it will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under any applicable Similar Law;

(h) if it is outside the United States and is not a U.S. person, that if it should resell or otherwise transfer the Notes prior to the expiration of the distribution compliance period (defined as 40 days after the later of the commencement of the offering and the closing date with respect to the original issuance of the Notes), it will do so only (i)(A) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act or (B) to a QIB in compliance with Rule 144A and (ii) in accordance with all applicable U.S. state securities laws; and it acknowledges that the Regulation S Global Notes will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS SECURITY [AND THE RELATED GUARANTEE] ([COLLECTIVELY,] THE "SECURITIES") HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT. THIS LEGEND SHALL CEASE TO APPLY UPON THE EXPIRY OF THE PERIOD OF 40 DAYS AFTER THE COMPLETION OF THE DISTRIBUTION OF ALL THE NOTES OF THE TRANCHE OF WHICH THIS NOTE FORMS A PART"; and

(i) that the Issuer, the Guarantor and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Issuer and the Guarantor; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Persons wishing to transfer an interest from one Registered Global Note to another or from global to definitive form or vice versa will be required to deliver a transfer certificate in the form attached to the Agency Agreement.

Institutional Accredited Investors who purchase Registered Notes in definitive form offered and sold in the United States in reliance upon the exemption from registration provided by Regulation D of the Securities Act are required to execute and deliver to the Registrar an IAI Investment Letter. Upon execution and delivery of an IAI Investment Letter by an Institutional Accredited Investor, Notes will be issued in definitive registered form, see "Form of the Notes."

The IAI Investment Letter will state, among other things, the following:

(a) that the Institutional Accredited Investor has received a copy of this Offering Circular and such other information as it deems necessary in order to make its investment decision;

(b) that the Institutional Accredited Investor understands that any subsequent transfer of the Notes is subject to certain restrictions and conditions set forth in this Offering Circular and the Notes (including those set out above) and that it agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes except in compliance with, such restrictions and conditions and the Securities Act;

(c) that, in the normal course of its business, the Institutional Accredited Investor invests in or purchases securities similar to the Notes;

(d) that the Institutional Accredited Investor is an Institutional Accredited Investor within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act that is an institution and has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Notes, and it and any accounts for which it is acting are each able to bear the economic risk of its or any such accounts' investment for an indefinite period of time;

(e) that the Institutional Accredited Investor is acquiring the Notes purchased by it for its own account or for one or more accounts (each of which is an Institutional Accredited Investor) as to each of which it exercises sole investment discretion and not with a view to any distribution of the Notes, subject, nevertheless, to the understanding that the disposition of its property shall at all times be and remain within its control; and

(f) that, in the event that the Institutional Accredited Investor purchases Notes, it will acquire Notes having a minimum purchase price of at least US$500,000 (or the approximate equivalent in another Specified Currency).

No sale of Legended Notes in the United States to any one purchaser will be for less than US$200,000 (or its foreign currency equivalent) principal amount or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount and no Legended Note will be issued in connection with such a sale in a smaller principal amount. If the purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least US$200,000 (or its foreign currency equivalent) or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount of Registered Notes.

Selling Restrictions

United States of America

The Notes 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 (i) to QIBs in reliance on Rule 144A, (ii) to Institutional Accredited Investors, that, prior to their purchase of the Notes have furnished an IAI Investment Letter and (iii) in accordance with Regulation S under the Securities Act.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to a United States person, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986 and regulations thereunder.

In connection with any Notes which are offered or sold outside the United States in reliance on an exemption from the registration requirements of the Securities Act provided under Regulation S ("Regulation S Notes"), each Dealer has represented, warranted and agreed, and each further Dealer appointed under the Program will be required to represent, warrant and agree, that it will not offer, sell or deliver such Regulations S Notes (i) as part of their distribution at any time or (ii) otherwise until 40 days after the completion of the distribution, as determined and certified by the relevant Dealer or, in the case of an issue of Notes on a syndicated basis, the relevant lead manager, of all Notes of the Tranche of which such Regulation S Notes are a part, within the United States or to, or for the account or benefit of, U.S. persons. Each Dealer has further agreed, and each further Dealer appointed under the Program will be required to agree, that it will send to each dealer to which it sells any Regulation S Notes during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Regulation S Notes within the United States or to, or for the account or benefit of, U.S. persons.

Until 40 days after the commencement of the offering of any Series of Notes, an offer or sale of such Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with an applicable exemption from registration under the Securities Act.

Dealers may arrange for the resale of Notes to QIBs pursuant to Rule 144A and each such purchaser of Notes is hereby notified that the Dealers may be relying on the exemption from the registration requirements of the Securities Act provided by Rule 144A. The minimum aggregate principal amount of Notes which may be purchased by a QIB pursuant to Rule 144A is US$200,000 (or the approximate equivalent thereof in any other currency). To the extent that the Issuer is not subject to or does not comply with the reporting requirements of Section 13 or 15(d) of the Exchange Act or the information furnishing requirements of Rule 12g3-2(b) thereunder, the Issuer has agreed to furnish to holders of Notes and to prospectus purchasers designated by such holders, upon request, such information as may be required by Rule 144A(d)(4).

Each issuance of Index Linked Notes or Dual Currency Notes shall be subject to such additional U.S. selling restrictions as the Issuer, the Guarantor and the relevant Dealer may agree as a term of the issuance and purchase of such Notes, which additional selling restrictions shall be set out in the applicable Pricing Supplement.

Public Offer Selling Restriction under the Prospectus Directive

In relation to each Member State of the EEA which has implemented the Prospectus Directive (each, a "Relevant Member State"), each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, 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 Notes which are the subject of the offering contemplated by this offering circular to the public in that Relevant Member State, except that it may, with effect from and including the Relevant Implementation Date, make an offer of such Notes to the public in that Relevant Member State:

(a) if the Pricing Supplement in relation to the Notes specify that an offer of those Notes may be made other than pursuant to Article 3(2) of the Prospectus Directive in that Relevant Member State (a "Non-exempt Offer"), following the date of publication of a prospectus in relation to such Notes which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, provided that any such prospectus has subsequently been completed by the Pricing Supplement contemplating such Non-exempt Offer, in accordance with the Prospectus Directive, in the period beginning and ending on the dates specified in such prospectus or Pricing Supplement, as applicable and the Issuer has consented in writing to its use for the purpose of that Non-exempt Offer;

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

(c) at any time to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) as permitted under the Prospectus Directive, subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by the Issuer for any such offer; or

(d) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer of Notes referred to in (b) to (d) above shall require the Issuer, the Guarantor or any Dealer 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 Notes to the public" in relation to any Notes 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 Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each Dealer has represented, warranted and agreed, and each further Dealer appointed under the Program will be required to represent, warrant and agree that:

(a) in relation to any Notes having a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell any Notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Notes would otherwise constitute a contravention of Section 19 of the UK Financial Services and Markets Act 2000 (the "FSMA") by the Issuer;

(b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer or the Guarantor; and

(c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Notes in, from or otherwise involving the United Kingdom.

Japan

The Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Law. No. 25 of 1948, as amended) (the "FIEA"). Each Dealer has represented, warranted and agreed and each further Dealer appointed under the Program will be required to represent, warrant and agree that it has not offered or sold and will not offer or sell any Notes, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (as defined under Item 5, Paragraph 1, Article 6 of the Foreign Exchange and Foreign Trade Control Law (Law No. 228 of 1949, as amended)), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, a resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEA and other applicable laws, regulations and ministerial guidelines of Japan.

Hong Kong

Each Dealer has represented, warranted and agreed and each further Dealer appointed under the Program will be required to represent, warrant and agree that:

(a) it has not offered or sold and will not offer or sell in Hong Kong Special Administrative Region of the People's Republic of China ("Hong Kong"), by means of any document, any Notes (except for Notes which are a "structured product" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong) other than (i) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance; and

(b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance and any rules made under that Ordinance.

The Dealers may offer and sell Notes through certain of their affiliates. One or more of the Dealers may use affiliates or other appropriately licensed entities for sales of the Notes in jurisdictions in which such Dealers are not otherwise permitted.

Singapore

Each Dealer has acknowledged, and each further Dealer appointed under the Program will be required to acknowledge, 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 Dealer has represented, warranted and agreed and each further Dealer appointed under the Program will be required to represent, warrant and agree that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell the Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Offering Circular or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor 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 the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)), the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (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 Notes pursuant to an offer made under Section 275 of the SFA except:

(1) 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;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Korea

Each Dealer has represented, warranted and agreed and each further Dealer appointed under the Program will be required to represent, warrant and agree that:

(a) it has not offered, sold or delivered and will not offer, sell or deliver, directly or indirectly, any Notes in Korea, or to, or for the account or benefit of, any resident of Korea (as defined in the Foreign Exchange Transaction Law), except as otherwise permitted by applicable Korean laws and regulations; and

(b) any securities dealer to whom each Dealer and each further dealer may sell the Notes will agree that it will not offer, sell or deliver any Notes, directly or indirectly, in Korea, or to any resident of Korea, except as otherwise permitted by applicable Korean laws and regulations, or to any other dealer who does not so represent and agree.

General

Each Dealer has agreed and each further Dealer appointed under the Program will be required to agree 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 Notes or possesses or distributes the Offering Circular and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Dealer shall have any responsibility therefor.

If a jurisdiction requires that any offering of Notes under the Program be made by a licensed broker or dealer and the Dealers or any affiliate of the Dealers is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by that Dealer or its affiliate on behalf of the Issuer in such jurisdiction.

Neither the Company, the Guaranteed Issuers nor any of the Dealers represents that Notes may at any time lawfully be sold in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to any exemption available thereunder, or assumes any responsibility for facilitating such sale.

With regard to each Tranche, the relevant Dealer will be required to comply with such other additional restrictions as the Issuer, the Guarantor and the relevant Dealer shall agree and as shall be set out in the applicable Pricing Supplement.

BOOK-ENTRY CLEARANCE SYSTEMS

The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear or Clearstream, Luxembourg (each a "Clearing System" and together, the "Clearing Systems") currently in effect. The information in this section concerning the Clearing Systems has been obtained from sources that the Issuer and the Guarantor believe to be reliable, but none of the Company, the Guaranteed Issuers nor any Dealer takes any responsibility for the accuracy thereof. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. None of the Company, the Guaranteed Issuers, the Arranger, any Dealer nor any other party to the Agency Agreement will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Notes held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests. The relevant Pricing Supplement will specify the Clearing System(s) applicable for each Series.

Book-entry Systems

DTC

DTC has advised the Company and the Guaranteed Issuers that it is a limited purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to Section 17A of the Exchange Act. DTC holds securities that its participants ("Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC System is also available to others such as securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants").

Under the rules, regulations and procedures creating and affecting DTC and its operations (the "Rules"), DTC makes book-entry transfers of Registered Notes among Direct Participants on whose behalf it acts with respect to Notes accepted into DTC's book-entry settlement system ("DTC Notes") as described below and receives and transmits distributions of principal and interest on DTC Notes. The Rules are on file with the United States Securities and Exchange Commission. Direct Participants and Indirect Participants with which beneficial owners of DTC Notes ("Owners") have accounts with respect to the DTC Notes similarly are required to make book-entry transfers and receive and transmit such payments on behalf of their respective Owners. Accordingly, although Owners who hold DTC Notes through Direct Participants or Indirect Participants will not possess Registered Notes, the Rules, by virtue of the requirements described above, provide a mechanism by which Direct Participants will receive payments and will be able to transfer their interest in respect of the DTC Notes.

Purchases of DTC Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the DTC Notes on DTC's records. The ownership interest of each actual purchaser of each DTC Note ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the DTC Notes are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in DTC Notes, except in the event that use of the book-entry system for the DTC Notes is discontinued.

To facilitate subsequent transfers, all DTC Notes deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co, or such other name as may be requested by an authorized representative of DTC. The deposit of DTC Notes with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the DTC Notes; DTC's records reflect only the identity of the Direct Participants to whose accounts such DTC Notes are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to DTC. If less than all of the DTC Notes within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to DTC Notes unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer and the Guarantor as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the DTC Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the DTC Notes will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Issuer, the Guarantor or the Principal Paying Agent on the due date for payment in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Issuer or the Guarantor, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer (and failing whom, the Guarantor), disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of Direct and Indirect Participants.

Under certain circumstances, including if there is an Event of Default under the Notes, DTC will exchange the DTC Notes for definitive Registered Notes, which it will distribute to its Participants in accordance with their proportionate entitlements and which, if representing interests in a Rule 144A Global Note, will be legended as set forth under "Subscription and Sale and Transfer and Selling Restrictions."

Since DTC may only act on behalf of Direct Participants, who in turn act on behalf of Indirect Participants, any Owner desiring to pledge DTC Notes to persons or entities that do not participate in DTC, or otherwise take actions with respect to such DTC Notes, will be required to withdraw its Registered Notes from DTC as described below.

Euroclear and Clearstream, Luxembourg

Euroclear and Clearstream, Luxembourg each holds securities for its customers and facilitates the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream, Luxembourg provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream, Luxembourg also deal with domestic securities markets in several countries through established depository and custodial relationships. Euroclear and Clearstream, Luxembourg have established an electronic bridge between their two systems across which their respective participants may settle trades with each other. Euroclear and Clearstream, Luxembourg customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream, Luxembourg is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system.

Book-entry Ownership of and Payments in respect of DTC Notes

The Issuer and the Guarantor may apply to DTC in order to have any Tranche of Notes represented by a Registered Global Note accepted in its book-entry settlement system. Upon the issue of any such Registered Global Note, DTC or its custodian will credit, on its internal book-entry system, the respective nominal amounts of the individual beneficial interests represented by such Registered Global Note to the accounts of persons who have accounts with DTC. Such accounts initially will be designated by or on behalf of the relevant Dealer. Ownership of beneficial interests in such a Registered Global Note will be limited to Direct Participants or Indirect Participants, including, in the case of any Regulation S Global Note, the respective depositaries of Euroclear and Clearstream, Luxembourg. Ownership of beneficial interests in a Registered Global Note accepted by DTC will be shown on, and the transfer of such ownership will be effected only through, records maintained by DTC or its nominee (with respect to the interests of Direct Participants) and the records of Direct Participants (with respect to interests of Indirect Participants).

Payments in U.S. dollars of principal and interest in respect of a Registered Global Note accepted by DTC will be made to the order of DTC or its nominee as the registered holder of such Note. In the case of any payment in a currency other than U.S. dollars, payment will be made to the Exchange Agent on behalf of DTC or its nominee and the Exchange Agent will (in accordance with instructions received by it) remit all or a portion of such payment for credit directly to the beneficial holders of interests in the Registered Global Note in the currency in which such payment was made and/or cause all or a portion of such payment to be converted into U.S. dollars and credited to the applicable Participants' account.

The Issuer and the Guarantor expect DTC to credit accounts of Direct Participants on the applicable payment date in accordance with their respective holdings as shown in the records of DTC unless DTC has reason to believe that it will not receive payment on such payment date. The Issuer and the Guarantor also expect that payments by Participants to beneficial owners of Notes will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers, and will be the responsibility of such Participant and not the responsibility of DTC, the Principal Paying Agent, the Registrar, the Issuer or the Guarantor. Payment of principal, premium, if any, and interest, if any, on Notes to DTC is the responsibility of the Issuer (and failing whom, the Guarantor).

Transfers of Notes Represented by Registered Global Notes

Transfers of any interests in Notes represented by a Registered Global Note within DTC, Euroclear and Clearstream, Luxembourg will be effected in accordance with the customary rules and operating procedures of the relevant clearing system. The laws in some States within the United States require that certain persons take physical delivery of securities in definitive form. Consequently, the ability to transfer Notes represented by a Registered Global Note to such persons may depend upon the ability to exchange such Notes for Notes in definitive form. Similarly, because DTC can only act on behalf of Direct Participants in the DTC system who in turn act on behalf of Indirect Participants, the ability of a person having an interest in Notes represented by a Registered Global Note accepted by DTC to pledge such Notes to persons or entities that do not participate in the DTC system or otherwise to take action in respect of such Notes may depend upon the ability to exchange such Notes for Notes in definitive form. The ability of any holder of Notes represented by a Registered Global Note accepted by DTC to resell, pledge or otherwise transfer such Notes may be impaired if the proposed transferee of such Notes is not eligible to hold such Notes through a direct or indirect participant in the DTC system.

Subject to compliance with the transfer restrictions applicable to the Registered Notes described under "Subscription and Sale and Transfer and Selling Restrictions," cross-market transfers between DTC, on the one hand, and directly or indirectly through Clearstream, Luxembourg or Euroclear accountholders, on the other, will be effected by the relevant clearing system in accordance with its rules and through action taken by the Registrar, the Principal Paying Agent and any custodian ("Custodian") with whom the relevant Registered Global Notes have been deposited.

On or after the Issue Date for any Series, transfers of Notes of such Series between accountholders in Clearstream, Luxembourg and Euroclear and transfers of Notes of such Series between participants in DTC will generally have a settlement date three business days after the trade date (T+3). The customary arrangements for delivery versus payment will apply to such transfers.

Cross-market transfers between accountholders in Clearstream, Luxembourg or Euroclear and DTC participants will need to have an agreed settlement date between the parties to such transfer. Because there is no direct link between DTC, on the one hand, and Clearstream, Luxembourg and Euroclear, on the other, transfers of interests in the relevant Registered Global Notes will be effected through the Registrar, the Principal Paying Agent and the Custodian receiving instructions (and, where appropriate, certification) from the transferor and arranging for delivery of the interests being transferred to the credit of the designated account for the transferee. In the case of cross-market transfers, settlement between Euroclear or Clearstream, Luxembourg accountholders and DTC participants cannot be made on a delivery versus payment basis. The securities will be delivered on a free delivery basis and arrangements for payment must be made separately.

DTC, Clearstream, Luxembourg and Euroclear have each published rules and operating procedures designed to facilitate transfers of beneficial interests in Registered Global Notes among participants and accountholders of DTC, Clearstream, Luxembourg and Euroclear. However, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued or changed at any time. None of the Issuer, the Guarantor, the Agents or any Dealer will be responsible for any performance by DTC, Clearstream, Luxembourg or Euroclear or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations and none of them will have any liability for any aspect of the records relating to or payments made on account of beneficial interests in the Notes represented by Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial interests.

INDEX TO FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS OF THE COMPANY

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Independent auditors' report

The Shareholders and Board of Directors
Korea Resources Corporation

We have audited the accompanying consolidated financial statements of Korea Resources Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as at December 31, 2016 and 2015 and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Government Accounting Standards for Public Enterprises and Quasi-government Organizations "Government Accounting Standards", and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated 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 consolidated 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 consolidated financial statements present fairly, in all material respects, the financial position of the Group as at December 31, 2016 and 2015, and their financial performance and cash flows for the years then ended in accordance with Government Accounting Standards.

Other matters

Without qualifying our opinion, as described in Note 2 to the consolidated financial statements, the Group applies Korea International Financial Reporting Standards where accounting provisions have not been specified under Government Accounting Standards.

Ernst & Young Han Young

February 28, 2017

This audit report is effective as at February 28, 2017, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditors' report to the time this report is used. Such events and circumstances could significantly affect the accompanying subsidiaries financial statements and may result in modifications to this report.

Korea Resources Corporation and its subsidiaries
Consolidated statements of financial position
as at December 31, 2016 and 2015

(Korean won)

	Notes	2016	2015
Assets			
Current assets			
Cash and cash equivalents	5,6,27,42	₩ 114,148,798,158	₩ 145,344,742,701
Current financial assets, net	6,7,10,11,42,44	180,765,637,591	116,362,554,471
Trade and other receivables, net	8,42,44	125,204,852,095	103,298,251,976
Inventories, net	12	69,774,474,979	107,853,313,086
Other current assets	13	17,409,942,396	13,367,159,443
Current tax asset		1,309,353,243	247,433,786
Assets held-for-sale	49	21,267,118,847	23,446,385,204
		529,880,177,309	509,919,840,667
Non-current assets			
Non-current financial assets, net	6,7,9,10,11,27,42,44	1,364,308,157,413	1,168,803,583,971
Long-term trade and other receivables, net	8,42	7,930,724,752	9,020,965,344
Property, plant and equipment, net	16,27	1,014,039,483,754	1,441,821,603,943
Investment properties, net	17	2,250,665,125	2,201,757,259
Goodwill, net	18	2,701,609,950	2,701,609,950
Intangible assets other than goodwill	19,27	76,262,412,496	72,613,602,685
Investments in associates and joint ventures	14,15,27,44	1,040,015,002,622	1,140,166,941,779
Deferred tax assets	40	103,320,543,411	122,077,377,046
Other non-current assets	13	225,066,329,014	218,154,072,750
		3,835,894,928,537	4,177,561,514,727
Total assets		**₩ 4,365,775,105,846**	**₩ 4,687,481,355,394**
Liabilities			
Current liabilities			
Trade and other payables	21,42,44	₩ 53,710,834,297	₩ 72,834,611,107
Current financial liabilities	7,20,22,23,42	509,930,337,702	985,570,319,192
Current provisions	26	5,372,128,027	4,340,555,556
Other current liabilities	28,44	6,675,455,906	3,906,643,954
		575,688,755,932	1,066,652,129,809
Non-current liabilities			
Non-current financial liabilities	7,20,22,23,24,42	4,492,154,483,744	3,328,958,661,835
Other non-current liabilities	28	52,263,489,837	51,002,390,460
Employee benefit liability	25	1,425,694,271	2,946,118,589
Non-current provision	26	85,106,886,653	171,005,921,003
		4,630,950,554,505	3,553,913,091,887
Total liabilities		**₩ 5,206,639,310,437**	**₩ 4,620,565,221,696**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of financial position
as at December 31, 2016 and 2015 (cont'd)
(Korean won)

	Notes	2016	2015
Equity			
Issued capital	1,29	₩ 1,958,270,200,000	₩ 1,890,370,200,000
Discount on stock issuance		(2,048,521,362)	(2,048,521,362)
		1,956,221,678,638	1,888,321,678,638
Deficits	30,31		
Legal reserve		-	26,058,044,906
Undisposed deficits		(2,717,187,461,058)	(1,936,012,981,011)
		(2,717,187,461,058)	(1,909,954,936,105)
Other comprehensive income	25,32	164,308,372,509	150,861,978,322
Equity attributable to equity holders of the parent		(596,657,409,911)	129,228,720,855
Non-controlling interests		(244,206,794,680)	(62,312,587,157)
Total equity		**(840,864,204,591)**	**66,916,133,698**
Total equity and liabilities		**₩ 4,365,775,105,846**	**₩ 4,687,481,355,394**

The accompanying notes are an integral part of the consolidated finacial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2016 and 2015
(Korean won)

	Notes		2016		2015
Sales	4,33,44	₩	330,481,001,748	₩	297,925,153,355
Cost of sales	41		(607,260,845,096)		(1,420,520,269,013)
Gross loss			**(276,779,843,348)**		**(1,122,595,115,658)**
Selling and administrative expenses	34,41		(36,809,209,808)		(34,680,210,474)
Operating loss			**(313,589,053,156)**		**(1,157,275,326,132)**
Other operating income	35		1,312,087,735		3,279,918,164
Other operating expenses	36		(101,696,801,457)		(99,226,967,265)
Other loss, net	37		(562,579,393,904)		(934,415,865,895)
Finance income	38		19,732,843,932		12,952,790,938
Finance costs	39		(7,148,042,756)		(10,180,780,411)
Loss before tax			**(963,968,359,606)**		**(2,184,866,230,601)**
Income tax expense (benefit)	40		23,448,749,659		(121,292,215,805)
Loss for the year		**₩**	**(987,417,109,265)**	**₩**	**(2,063,574,014,796)**
Attributable to:					
Equity holders of the parent			(806,518,051,829)		(1,792,559,022,762)
Non-controlling interests			(180,899,057,436)		(271,014,992,034)
		₩	(987,417,109,265)	₩	(2,063,574,014,796)
Other comprehensive income (loss)					
Other comprehensive loss not to be reclassified to profit or loss in subsequent periods, net of tax:					
Re-measurement loss on defined benefit plan		₩	(714,473,124)	₩	(432,622,571)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods, net of tax:					
Adjustment of government subsidy			62,757,443		125,171,010
Net gain on valuation of available-for-sale financial assets			54,546,452		14,894,996,364
Effective portion of changes in fair value of cash flow hedge			(351,264,045)		(347,762,331)
Exchange differences on translation of foreign operations			(9,804,597,115)		32,413,589,591
Changes in equity in equity method investments			20,219,573,832		71,938,394,698
Other comprehensive income for the year			9,466,543,443		118,591,766,761
Total comprehensive loss		**₩**	**(977,950,565,822)**	**₩**	**(1,944,982,248,035)**
Attributable to:					
Equity holders of the parent			(796,056,358,299)		(1,674,736,655,836)
Non-controlling interests			(181,894,207,523)		(270,245,592,199)
		₩	(977,950,565,822)	₩	(1,944,982,248,035)

The accompanying notes are an integral part of the consolidated finacial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2016 and 2015
(Korean won)

	Attributable to equity holders of the parent					
	Issued capital	**Retained earnings**	**Other components of**	**Non-controlling**	**Total equity**
As at January 1, 2015	₩ **1,708,169,678,638**	₩ **(116,963,290,772)**	₩ **32,606,988,825**	₩ **207,933,005,042**	₩ **1,831,746,381,733**
Loss for the year	-	(1,792,559,022,762)	-	(271,014,992,034)	(2,063,574,014,796)
Other comprehensive income (loss)	-	(432,622,571)	118,254,989,497	769,399,835	118,591,766,761
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods, net of tax:					
Re-measurement losses on defined benefit plans	-	(432,622,571)	-	-	(432,622,571)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods, net of tax:					
Changes in equity adjustments in equity method investments	-	-	71,938,394,698	-	71,938,394,698
Gain on valuation of available-for-sale financial asset	-	-	14,894,996,364	-	14,894,996,364
Effective portion of changes in fair value of cash flow hedge	-	-	(347,762,331)	-	(347,762,331)
Exchange differences on translation of foreign operations	-	-	31,644,189,756	769,399,835	32,413,589,591
Adjustment of government subsidy	-	-	125,171,010	-	125,171,010
Total comprehensive income (loss)	**-**	**(1,792,991,645,333)**	**118,254,989,497**	**(270,245,592,199)**	**(1,944,982,248,035)**
Issuance of share capital	180,200,000,000	-	-	-	180,200,000,000
Dividends paid	(48,000,000)	-	-	-	(48,000,000)
Decrease in other investments	(48,000,000)	-	-	-	(48,000,000)
Decrease in other distributions					
Acquisition of shares in subsidiaries					
Directly reflected in capital transaction with owners	180,152,000,000	-	-	-	180,152,000,000
As at December 31, 2015	₩ **1,888,321,678,638**	₩ **(1,909,954,936,105)**	₩ **150,861,978,322**	₩ **(62,312,587,157)**	₩ **66,916,133,698**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2016 and 2015 (cont'd)

(Korean won)

	Attributable to equity holders of the parent				
	Issued capital	**Retained earnings**	**Other components of**	**Non-controlling**	**Total equity**
As at January 1, 2016	**₩ 1,888,321,678,638**	**₩ (1,909,954,936,105)**	**₩ 150,861,978,322**	**₩ (62,312,587,157)**	**₩ 66,916,133,698**
Loss for the year	-	(806,518,051,829)	-	(180,899,057,436)	(987,417,109,265)
Other comprehensive income (loss)	-	(714,473,124)	11,176,166,654	(995,150,087)	9,466,543,443
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods, net of tax:					
Re-measurement losses on defined benefit plans	-	(714,473,124)	-	-	(714,473,124)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods, net of tax:					
Changes in equity adjustments in equity method investments	-	-	20,219,573,832	-	20,219,573,832
Gain on valuation of available-for-sale financial asset	-	-	54,546,452	-	54,546,452
Effective portion of changes in fair value of cash flow hedge	-	-	(351,264,045)	-	(351,264,045)
Exchange differences on translation of foreign operations	-	-	(8,809,447,028)	(995,150,087)	(9,804,597,115)
Adjustment of government subsidy	-	-	62,757,443	-	62,757,443
Total comprehensive income (loss)	**-**	**(807,232,524,953)**	**11,176,166,654**	**(181,894,207,523)**	
Issuance of share capital	67,900,000,000	-	-	-	67,900,000,000
Increase in other investment	-	-	2,270,227,533	-	2,270,227,533
Directly reflected in capital transaction with owners	67,900,000,000	-	2,270,227,533	-	70,170,227,533
As at December 31, 2016	**₩ 1,956,221,678,638**	**₩ (2,717,187,461,058)**	**₩ 164,308,372,509**	**₩ (244,206,794,680)**	**₩ (840,864,204,591)**

The accompanying notes are an integral part of the consolidated finacial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015
(Korean won)

		2016		2015
Operating activities				
Loss for the year	₩	(987,417,109,265)	₩	(2,063,574,014,796)
Adjustments to reconcile loss (gain) for the year to net cash flows:				
Loss on valuation of inventories		-		22,629,800,000
Depreciation		23,607,663,601		28,044,725,229
Amortization of intangible assets		2,874,730,436		3,486,471,116
Loss on impairment of available-for-sale financial assets		404,298,080		40,162,749,269
Loss on disposal of investments in associates		2,387,147,684		-
Loss on impairment of investments in associates		3,706,740,061		97,655,536,392
Severance and retirement benefits		2,115,446,850		1,815,454,068
Bad debt expense		2,568,060,015		9,579,104,322
Other bad debt expenses		49,912,815,718		568,538,112
Loss on disposal of property, plant and equipment		63,416,177		727,869,016
Loss on disposal of intangible assets		-		129,064,939
Loss on impairment of tangible assets		561,211,765,951		941,535,246,976
Loss on Impairment of intangible assets		1,157,759,448		32,764,234,125
Loss on valuation of equity method investments		261,050,399,877		912,794,665,366
Loss on foreign currency translation		83,158,026,198		146,796,506,073
Loss on valuation of derivatives		4,212,604,556		8,217,204,099
Transfer of other provisions		51,058,140,534		97,467,036,000
Interest expenses		69,027,844,419		52,037,476,405
Income tax expense (benefit)		23,448,749,659		(121,292,215,805)
Other expenses		7,424,974,431		5,655,629,878
Reversal of allowance for doubtful accounts		(1,467,988,808)		(6,921,361,819)
Reversal of allowance for other doubtful accounts		(30,746,192)		(101,504,954)
Gain on disposal of property, plant and equipment		(41,688,318)		(41,759,329,538)
Gain on valuation of equity method investments		(657,187,796)		(346,832,409)
Gain on foreign currency translation		(70,420,359,849)		(104,453,305,454)
Gain on valuation of derivatives		(11,297,815,182)		-
Gain on disposal of investments in associates		(1,094,327,262)		(2,993,724,631)
Gain on exemption of liabilities		-		(1,775,609,097)
Interest income		(92,829,803,295)		(99,474,930,706)
		971,550,666,993		2,022,948,496,972

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015 (cont'd)
(Korean won)

	2016	2015
Working capital adjustments:		
Current trade receivables	₩ (6,345,817,298)	₩ 380,566,149
Deposits	1,089,985,685	(7,352,155,333)
Other receivables	(49,263,177,079)	(12,407,774,058)
Inventories	39,714,223,367	(32,781,853,488)
Accrued income	(18,708,760)	(249,288,235)
Derivative assets	-	4,837,796,312
Advance payments	(2,838,604,014)	121,534,569
Prepaid expenses	(3,933,497,629)	1,600,174,915
Other current assets	45,927,574	(294,520,863)
Other non-current assets	(6,877,566,540)	(34,062,999,172)
Other payable	(31,686,259,947)	(48,329,718,916)
Accrued expenses	476,472,174	(2,136,011,549)
Trade payables	(1,186,266,193)	1,239,182,157
Advance receipts	1,843,621,380	(5,408,320,677)
Withholdings	1,728,306,335	(422,599,438)
Unearned revenue	(1,135,122,928)	(232,557,308)
Payment of severance and retirement benefits	(4,350,344,292)	(183,169,157)
Other current liabilities	541,968,500	(1,898,547,000)
Other non-current liabilities	(324,122,904)	(4,730,994,605)
	(62,518,982,569)	(142,311,255,697)
Interest received	18,391,976,226	20,702,157,528
Interest paid	(109,558,047,085)	(105,592,877,475)
Devidends received	746,507,408	1,380,536,975
Income tax paid	(2,851,515,018)	(2,875,574,622)
Net cash flows used in operating activities	**(171,656,503,310)**	**(269,322,531,115)**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015 (cont'd)
(Korean won)

	2016	2015
Investing activities		
Disposal of land	₩ -	₩ 60,420,736,836
Disposal of buildings	-	4,605,860,011
Disposal of structrues	-	809,317,569
Disposal of machinery	-	106,669,221
Disposal of vehicles	154,145,072	72,980,984
Disposal of other property, plant and equipment	12,895,743	10,362,500
Disposal of investments in associates	3,681,500,000	15,995,288,301
Decrease in short-term financial instruments	5,163,659,037,537	4,212,756,772,372
Decrease in long-term financial instruments	8,103,760	682,477,791
Decrease in short-term loans	192,486,973,204	158,024,010,731
Decrease in long-term loans	66,256,897,227	44,244,697,770
Proceeds from government grants	3,951,263,279	3,202,234,302
Acquisition of land	-	(282,388,384)
Acquisition of buildings	(3,051,983,425)	(40,051,012,227)
Acquisition of structures	(7,340,000)	(124,978,855)
Acquisition of machinery	(19,540,545,267)	(2,057,931,094)
Acquisition of vehicles	(50,916,600)	(312,827,240)
Increase in construction in progress	(76,473,247,809)	(168,102,331,099)
Acquisition of other property, plant and equipment	(3,315,097,483)	(10,478,922,107)
Acquisition of exploration and evaluation assets	(5,228,504,667)	(3,649,741,313)
Acquisition of software	(719,555,672)	(3,984,591,485)
Increase in short-term loans	(39,962,809,179)	(3,429,995,154)
Increase in long-term loans	(468,322,168,837)	(323,936,151,092)
Increase in investments in associates	(283,584,660)	(11,575,989,929)
Increase in investments in joint ventures	(3,566,597,522)	(10,501,224,103)
Cash out flows from losing controls over subsidiaries and other operations	(4,608,177)	-
Increase in short-term financial instruments	(5,227,820,576,426)	(4,213,382,621,964)
Net cash flows used in investing activities	**(418,136,719,902)**	**(290,939,297,658)**
Financing activities		
Increase in short-term borrowings	353,453,040,000	1,233,399,480,000
Increase in long-term borrowings	94,000,500,000	39,482,763,000
Issuance of bonds	1,112,147,408,600	1,202,580,827,625
Issuance of share capital	67,900,000,000	180,152,000,000
Repayment of short-term borrowings	(384,941,990,000)	(1,230,000,000,000)
Repayment of current portion of long-term borrowings	(94,848,253,512)	(87,356,469,256)
Repayment of current portion of long-term bonds	(539,120,000,000)	(768,800,000,000)
Repayment of long-term borrowings	(38,526,740,050)	(11,769,000,000)
Repayment of asset-backed loans	(13,473,716,340)	(15,320,666,531)
Net cash flows provided by financing activities	**556,590,248,698**	**542,368,934,838**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015 (cont'd)
(Korean won)

		2016		2015
Net decrease in cash and cash equivalents before effect of foreign exchange difference	₩	(33,202,974,514)	₩	(17,892,893,935)
Net foreign exchange difference		(562,115,371)		7,759,731,910
Net decrease in cash and cash equivalents		(33,765,089,885)		(10,133,162,025)
Cash and cash equivalents as January 1		147,913,888,043		158,047,050,068
Cash and cash equivalents as December 31		**114,148,798,158**		**147,913,888,043**
(Government grants)		-		(2,569,145,342)
	₩	**114,148,798,158**	₩	**145,344,742,701**

The accompanying notes are an integral part of the consolidated finacial statements.

1. Corporate information

Korea Resources Corporation (the "Company") was incorporated on June 5, 1967 under the *Korea Mining Industry Promotion Agency Act* (currently, the *Korea Resources Corporation Act*) enacted on March 30, 1967. The Company was initially established as an integrated supporting organization for the mining industry to provide support for the development of private mines and to develop overseas mineral resources. Since 1967, the Company has been conducting technical and financial supporting activities in order to secure the necessary energy and mineral resources for the development of the national mining industry.

The Company's issued capital as at December 31, 2016 amounts to ₩1,958,270,200,000 and the shareholders of the Company and their equity interest are as follows (Korean won):

Shareholders	Issued capital	Equity interest (%)
The Government of the Republic of Korea	₩ 1,955,570,200,000	99.86
Korea Development Bank	2,700,000,000	0.14
	₩ 1,958,270,200,000	100.00

The Company's consolidated subsidiaries as at December 31, 2016 are as follows:

Subsidiary	Equity interest (%)	Major operating activities	Country of domicile
KORES Australia Pty Ltd.	100.00	Mining	Australia
KORES Canada Corp.	100.00	Mining	Canada
Minera Corocobre S.A	52.64	Mining	Bolivia
Sarisbury Limited	80.00	Mining	Niger
Stonebridge Trading 36	100.00	Mining	Republic of South Africa
Prime Asia Resources	100.00	Mining	Singapore
Ermani Ltd.	100.00	Mining	Tanzania
KORES Lux S.a.r.l and its subsidiary	100.00	Mining	Luxembourg

Significant financial information of the consolidated subsidiaries as at and for the year ended December 31, 2016 are as follows (Korean won):

Subsidiary	Total assets	Total liabilities	Sales	Profit (loss) before tax	Profit (loss) for the year
KORES Australia Pty Ltd.	₩ 283,816,635,634	₩ 40,174,676,635	₩ 46,398,479,092	₩ 3,619,365,705	₩ 1,754,848,665
KORES Canada Corp.	274,481,890,644	90,117,010,531	42,597,313	(79,007,357,583)	(79,007,357,584)
Minera Corocobre S.A	1,220,472,610	68,699,805	-	(6,874,884)	(6,874,884)
Sarisbury Limited	120,850	-	-	-	-
Stonebridge Trading 36	127,473,489	2,317,263	-	46,298,853	33,734,178
Prime Asia Resources	32,089,718,508	2,174,155,079	-	(58,673,371)	(58,673,371)
Ermani Ltd.	-	-	-	-	-
KORES Lux S.a.r.l and its subsidiary	1,180,214,243,357	1,718,104,695,398	1,863,432,258	(659,533,965,533)	(681,105,696,921)

2. Basis of preparation and accounting policies

2.1 Basis of preparation

Korea Resources Corporation (the “Company”) and its subsidiaries (collectively referred to as the “Group”) maintains its official accounting records in Korean won and prepare statutory financial statements in the Korean language in conformity with Government Accounting Standards for State-owned Entity and Quasi-government Organizations (“Government Accounting Standards”), and in accordance with the Article 2, paragraph 5 of Government Accounting Standards, Korea International Financing Reporting Standards (“KIFRS”) are applied to the Authority’s accounting treatments where not specified in Government Accounting Standards.

Certain accounting principles applied by the Group that conform with *Government Accounting Standards* are as follows:

Government grants (Article 44 Accounting of Government grants)
Government grants that are earned for the acquisition of assets are recognized as a deduction from the assets and are recognized in profit or loss over the useful life of the assets by offsetting the depreciation. The Group recognizes the grants which are used for operating the program requested by the Government of the Republic of Korea (the “Government”) and the related law or for compensating the differences incurred by the Government’s price control, in profit or loss over the period.

Among the grants and consignment business budget designated by Article 48, the balances which are not expensed can be accounted as a deduction from the related assets.

Accounting of government project expenses (Article 48)
Government grants are recognized in the consolidated statement of comprehensive income over the periods in which the Group recognizes the related costs, for which the grants are intended to compensate as an expense.

Contribution to employee welfare fund (Article 49)
The Group raises contribution to employee welfare fund according to contribution to *the Intra-company Labor Welfare Fund Act*, and accounts it as an operating expense.

There was none applied differently from Government Accounting Standards.

2.2 Standards issued but not yet effective

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group’s financial statements are disclosed below.

KIFRS 1109 *Financial Instruments*
The KASB issued the final version of KIFRS 1109 *Financial Instruments* that replaces KIFRS 1039 *Financial Instruments: Recognition and Measurement* and all previous versions. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. KIFRS 1109 is effective for annual periods beginning on or after January 1, 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.

In connection with the adoption of KIFRS 1109, the Group has not yet undertaken any update on its internal control processes or a change in the accounting system related to the reporting of financial instruments, and has not been able to analyze the financial impact of the new standard on the financial statements.

2.2 Standards issued but not yet effective(cont'd)

KIFRS 1115 *Revenue from Contracts with Customers*
Under KIFRS 1115, revenue is recognized 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 new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. Early adoption is permitted.

As at 31, December 2016, the Group has not yet undertaken any update on its internal control processes or a change in the accounting system in relation to the adoption of KIFRS 1115, and has not been able to analyze the impact of the adoption of KIFRS on the financial statements. The Group will be analyzing the financial impact of the adoption of KIFRS 1115 by the end of the year 2017 and disclose the results in the notes to the financial statements for the year 2017.

Amendments to KIFRS 1110 and KIFRS 1028 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*
The amendments address the conflict between KIFRS 1110 and KIFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in KIFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The IASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. The Group will apply these amendments when they become effective.

Amendments to KIFRS 1007 *Statement of Cash Flows: Disclosure Initiative*
The amendments to KIFRS 1007 *Statement of Cash Flows* are part of the IASB's Disclosure Initiative and require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. On initial application of the amendment, entities are not required to provide comparative information for preceding periods. These amendments are effective for annual periods beginning on or after 1 January 2017, with early application permitted. Application of the amendments will result in additional disclosures provided by the Group.

Amendments to KIFRS 10**12 *Recognition of Deferred Tax Assets for Unrealized Losses***
The amendments clarify that an entity needs to consider whether tax law restricts the sources of taxable profits against which it may make deductions on the reversal of that deductible temporary difference. Furthermore, the amendments provide guidance on how an entity should determine future taxable profits and explain the circumstances in which taxable profit may include the recovery of some assets for more than their carrying amount.

Entities are required to apply the amendments retrospectively. However, on initial application of the amendments, the change in the opening equity of the earliest comparative period may be recognized in the opening retained earnings (or in another component of equity, as appropriate), without allocating the change between opening retained earnings and other components of equity. Entities applying this relief must disclose that fact. These amendments are effective for annual periods beginning on or after 1 January 2017 with early application permitted. If an entity applies the amendments for an earlier period, it must disclose that fact. These amendments are not expected to have any impact on the Group.

Amendments to KIFRS 1102 *Classification and Measurement of Share-based Payment Transactions*
The IASB issued amendments to KIFRS 1102 *Share-based Payment* that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled.

2.2 Standards issued but not yet effective (cont'd)

On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. The amendments are effective for annual periods beginning on or after 1 January 2018, with early application permitted. The Group is assessing the potential effect of the amendments on its consolidated financial statements.

These amendments are not relevant for the Group as it did not enter into any construction contract during the current period.

2.3 New and amended standards and interpretations

The Group applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2016. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

The nature and the effect of these changes are disclosed below. Although these new standards and amendments were applied for the first time in 2015, they did not have a material impact on the annual consolidated financial statements of the Group. The nature and the impact of each new standard or amendment is described below:

KIFRS 1114 *Regulatory Deferral Accounts*
KIFRS 1114 is an optional standard that allows an entity, whose activities are subject to rate-regulation, to continue applying most of its existing accounting policies for regulatory deferral account balances upon its first-time adoption of KIFRS. Entities that adopt KIFRS 1114 must present the regulatory deferral accounts as separate line items on the statement of financial position and present movements in these account balances as separate line items in the statement of profit or loss and OCI. The standard requires disclosure of the nature of, and risks associated with, the entity's rate-regulation and the effects of that rate-regulation on its financial statements. Since the Group is an existing KIFRS preparer and is not involved in any rate-regulated activities, this standard does not apply.

Amendments to KIFRS 1111 *Joint Arrangements*: *Accounting for Acquisitions of Interests*
The amendments to KIFRS 1111 require that a joint operator accounting for the acquisition of an interest in a joint operation, in which the activity of the joint operation constitutes a business, must apply the relevant KIFRS 1103 *Business Combinations* principles for business combination accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation if joint control is retained. In addition, a scope exclusion has been added to KIFRS 1111 to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party. The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are applied prospectively. These amendments do not have any impact on the Group as there has been no interest acquired in a joint operation during the period.

Amendments to KIFRS 1016 and KIFRS 1038 *Clarification of Acceptable Methods of Depreciation and Amortization*
The amendments clarify the principle in KIFRS 1016 *Property, Plant and Equipment* and KIFRS 1038 *Intangible Assets* that revenue reflects a pattern of economic benefits that are generated from operating a business (of which the asset is a part) rather than the economic benefits that are consumed through use of the asset. As a result, a revenue-based method cannot be used to depreciate property, plant and equipment and may only be used in very limited circumstances to amortize intangible assets. The amendments are applied prospectively and do not have any impact on the Group, given that it has not used a revenue-based method to depreciate its non-current assets.

2.3 New and amended standards and interpretations (cont'd)

Amendments to KIFRS 1016 and KIFRS 1041 *Agriculture: Bearer Plants*
The amendments change the accounting requirements for biological assets that meet the definition of bearer plants. Under the amendments, biological assets that meet the definition of bearer plants will no longer be within the scope of KIFRS 1041 *Agriculture*. Instead, KIFRS 1016 will apply. After initial recognition, bearer plants will be measured under KIFRS 1016 at accumulated cost (before maturity) and using either the cost model or revaluation model (after maturity). The amendments also require that produce that grows on bearer plants will remain in the scope of KIFRS 1041 measured at fair value less costs to sell. For government grants related to bearer plants, KIFRS 1020 *Accounting for Government Grants and Disclosure of Government Assistance* will apply. The amendments are applied retrospectively and do not have any impact on the Group as it does not have any bearer plants.

Amendments to KIFRS 1027 *Equity Method in Separate Financial Statements*
The amendments allow entities to use the equity method to account for investments in subsidiaries, joint ventures and associates in their separate financial statements. Entities already applying KIFRS and electing to change to the equity method in their separate financial statements have to apply that change retrospectively. These amendments do not have any impact on the Group's consolidated financial statements.

Annual Improvements *2012-2014 Cycle*
These amendments do not have any impact on the Group's consolidated financial statements. The improvements include:

KIFRS 1105 *Non-current Assets Held for Sale and Discontinued Operations*
Assets (or disposal groups) are generally disposed of either through sale or distribution to the owners. The amendment clarifies that changing from one of these disposal methods to the other would not be considered a new plan of disposal, rather it is a continuation of the original plan. There is, therefore, no interruption of the application of the requirements in KIFRS 1105. This amendment is applied prospectively.

KIFRS 1107 *Financial Instruments: Disclosures*
(i) Servicing contracts
The amendment clarifies that a servicing contract that includes a fee can constitute continuing involvement in a financial asset. An entity must assess the nature of the fee and the arrangement against the guidance for continuing involvement in KIFRS 1107 in order to assess whether the disclosures are required. The assessment of which servicing contracts constitute continuing involvement must be made retrospectively. However, the required disclosures need not be provided for any period beginning before the annual period in which the entity first applies the amendments.

(ii) Applicability of the amendments to KIFRS 1107 to condensed interim financial statements
The amendment clarifies that the offsetting disclosure requirements do not apply to condensed interim financial statements, unless such disclosures provide a significant update to the information reported in the most recent annual report. This amendment is applied retrospectively.

KIFRS 1019 *Employee Benefits*
The amendment clarifies that market depth of high quality corporate bonds is assessed based on the currency in which the obligation is denominated, rather than the country where the obligation is located. When there is no deep market for high quality corporate bonds in that currency, government bond rates must be used. This amendment is applied prospectively.

KIFRS 1034 *Interim Financial Reporting*
The amendment clarifies that the required interim disclosures must either be in the interim financial statements or incorporated by cross-reference between the interim financial statements and wherever they are included within the interim financial report (e.g., in the management commentary or risk report). The other information within the interim financial report must be available to users on the same terms as the interim financial statements and at the same time. This amendment is applied retrospectively.

2.3 New and amended standards and interpretations (cont'd)

Amendments to KIFRS 1001 *Disclosure Initiative*
The amendments to KIFRS 1001 clarify, rather than significantly change, existing KIFRS 1001 requirements. The amendments clarify:

- The materiality requirements in KIFRS 1001
- That specific line items in the statement(s) of profit or loss and OCI and the statement of financial position may be disaggregated
- That entities have flexibility as to the order in which they present the notes to financial statements
- That the share of OCI of associates and joint ventures accounted for using the equity method must be presented in aggregate as a single line item, and classified between those items that will or will not be subsequently reclassified to profit or loss

Furthermore, the amendments clarify the requirements that apply when additional subtotals are presented in the statement of financial position and the statement(s) of profit or loss and OCI. These amendments do not have any impact on the Group.

Amendments to KIFRS 1110, KIFRS 1112 and KIFRS 1028 *Investment Entities: Applying the Consolidation Exception*
The amendments address issues that have arisen in applying the investment entities exception under KIFRS 1110 *Consolidated Financial Statements*. The amendments to KIFRS 1110 clarify that the exemption from presenting consolidated financial statements applies to a parent entity that is a subsidiary of an investment entity, when the investment entity measures all of its subsidiaries at fair value.

Furthermore, the amendments to KIFRS 1110 clarify that only a subsidiary of an investment entity that is not an investment entity itself and that provides support services to the investment entity is consolidated. All other subsidiaries of an investment entity are measured at fair value. The amendments to KIFRS 1028 *Investments in Associates and Joint Ventures* allow the investor, when applying the equity method, to retain the fair value measurement applied by the investment entity associate or joint venture to its interests in subsidiaries.

KIFRS 1011 *Construction Contract* and KIFRS 2115 *Agreements for the Construction of Real Estate*
The amendments require additional disclosures of information on construction contracts when the percentage of work completed is measured based on the ratio of the total costs incurred to date to the total estimated contract costs, and the contract revenue exceeds 5% of the preceding year's total revenue. The amendments are effective for annual periods beginning on or after 1 January 2016, and require prospective application in the year in which an entity adopts it for the first time.

These amendments are not relevant for the Group as it did not enter into any construction contract during the current period.

2.4 Significant accounting policies

Significant accounting policies in accordance with KIFRS applied by the Group in the preparation of its consolidated financial statements are summarized below. These accounting policies have been applied consistently to the financial statements for the current period and accompanying comparative periods.

The consolidated financial statements have been prepared on a historical cost basis, except for certain non-current assets and financial assets. Historical cost is based on the fair value of the consideration given in exchange for assets. The Group's significant accounting policies are as follows:

2.5 Basis of consolidation

The consolidated financial statements of the Group include the financial statements of the Company and its subsidiaries (including special-purpose entities) controlled by the Company. Control is achieved where the Company has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statements of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive income of 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.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used in the Group.

All intragroup transactions, balances, income and expenses are eliminated in full upon consolidation for the years ended December 31, 2016 and 2015.

Changes in the Company's ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Company'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 recognized directly in equity and attributed to owners of the Company.

When the Company loses control of a subsidiary, the income or loss on disposal 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), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in other comprehensive income and accumulated in equity, the amounts previously recognized in other comprehensive income and accumulated in equity are accounted for as if the Company had directly disposed the relevant assets (i.e., reclassified to income or loss or transferred directly to retained earnings).

The fair value of any investment retained in the former subsidiary at the date when control is recognized as the fair value on initial recognition for subsequent accounting under KIFRS 1039 *Financial Instruments: Recognition and Measurement* or, when applicable, the cost on initial recognition of an investment in an associate or a jointly controlled entity.

2.6 Investment in associates

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. An entity is considered to have significant power when it is applicable one or more among followings.

① Being able to participate in Board of Directors meetings or equivalent organization, ② Being able to participate in process of making decisions including distribution of dividends or others, ③ Significiant transactions between the entity and the investee company ④ Mutual interchange in management ⑤ Providing essential technical information.

The results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105 Non-current Assets Held for Sale and Discontinued Operations. Under the equity method, an investment in an associate is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of profit or loss and other comprehensive income of the associate. When the Group's share of losses of an associate exceeds the Group's interest in that associate (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognizing its share of further losses.

2.6 Investment in associates (cont'd)

Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

The requirements of KIFRS 1039 Financial Instruments: Recognition and Measurement are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with KIFRS 1036 Impairment of Assets as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount, any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with KIFRS 1036 to the extent that the recoverable amount of the investment subsequently increases.

When a Group entity transacts with its associate, incomes and losses resulting from the transactions with the associate are recognized in the Group's consolidated financial statements only to the extent of interests in the associate that are not related to the Group.

2.7 Joint ventures

A joint venture is a contractual arrangement whereby the Group and other parties undertake an economic activity that is subject to joint control (i.e. when the strategic financial and operating policy decisions relating to the activities of the joint venture require the unanimous consent of the parties sharing control). Joint venture arrangements that involve the establishment of a separate entity in which each venture has an interest are referred to as jointly controlled entities.

When the Group performs economic activity under joint arrangements, the Group's share in joint entity and in liabilities which are made in collaboration with other participants are recognized in consolidated financial statements and classified by nature. The liabilities and expensed that is occurred directly regarding to the share in joint venture are accounted for accrual basis. The profits and expensed which are generated from transferring the Group's share are recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured.

The Group reports its interests in jointly controlled entities using the equity method, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105.

Any goodwill arising on the acquisition of the Group's interest in a jointly controlled entity is accounted for in accordance with the Group's accounting policy for goodwill arising in a business combination.

When the Group transacts with its jointly controlled entity, income and loss resulting from jointly controlled entities are recognized in the Group's consolidated statements only to the extent of interests in the jointly controlled entity that are not related to the Group.

2.8 Goodwill

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Impairment is determined for goodwill by assessing the recoverable amount of each cash generating units(CGU) (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying value, an impairment loss is recognized to goodwill and then other assets proportionately. Impairment losses related to goodwill cannot be reversed in the future periods.

When disposing of CGU, the related goodwill amount is included in gain or loss from disposal.

An accounting policy for goodwill from acquisition of a related company is explained in Note 2.6.

2.9 Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duty.

Sale of goods
Revenue from the sale of goods is recognized when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on delivery of the goods.

Rendering of services
Revenue from rendering of service is recognized using the percentage-of-completion method. The Group determines the percentage of completion using reliable measurement methods such as the level of work performed, the ratio of the cumulative workload incurred to date to the total estimated workload, the ratio of the cumulative costs incurred to date to the total estimated cost according to the nature of the transaction.

Interest income
For all financial instruments measured at amortized cost and interest-bearing financial assets classified as available-for-sale, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability.

2.10 Foreign currencies

The individual financial statements of each subsidiary are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Company entity are expressed in KRW which is the functional currency of the Group and the presentation currency for the consolidated financial statements.

For the purpose of the individual financial statements, the transaction that is accomplished with not functional currency but other currency is recorded using exchange rate at the date of transaction. Monetary assets and liabilities are translated using exchange rate of the date at the end of every reporting period. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. Whereas, non-monetary items measured at historical cost are not translated.

Exchange differences are recognized in profit or loss in the period in which they arise except for:

- Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- Exchange differences on transactions entered into in order to hedge certain foreign currency risks (see Note 43.2 below for hedging accounting policies); and
- Exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

2.11 Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attached to the grants and that the receipt of the grants are probable.

Government grants are recognized in the consolidated statement of comprehensive income over the periods in which the Group recognizes the related costs, for which the grants are intended to compensate as expense. Specifically, government grants, which are conditional to the Group purchasing, constructing or otherwise acquiring non-current assets, are recognized as deductions for related assets in the consolidated statement of financial position and transferred to profit or loss over the estimated useful lives of the related assets.

2.11 Government grants (cont'd)

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

In addition, a benefit from a government loan at a below-market interest rate is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

2.12 Pension benefits

Payments to defined contribution plans are expensed as incurred, which is when the employees render service.

For defined benefit pension plans and other post-employment benefits, the net periodic pension expense is actuarially determined on an annual basis by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related pension liability.

All actuarial gains and losses that arise in calculating the present value of the defined benefit obligation and the fair value of plan assets are recognized immediately in retained earnings and included in the statement of comprehensive income. The vested portion of past service cost arising from plan amendments is recognized immediately in the income statement. The unvested portion is amortized on a straight-line basis over the average remaining period until the benefits become vested.

The asset or liability recognized in the statement of financial position is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, together with adjustments for unrecognized past service costs. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

2.13 Income tax

Income tax consists of current tax and deferred tax.

Current tax
The tax currently payable is based on taxable income for the year. Taxable income differs from income as reported in the consolidated statement of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax
Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable income. Deferred tax liabilities are generally recognized for all taxable temporary differences.

Deferred tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable income will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable income nor the accounting income.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

2.13 Income tax (cont'd)

Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable income against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable income will be available to allow all or part of the asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are

Expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Current and deferred tax for the year
Current and deferred tax are recognized in income or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

2.14 Property, plant and equipment

Property, plant and equipment is measured initially at cost. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and accumulated impairment losses.

The cost of an item of property, plant and equipment is directly attributable to their purchase or construction, which 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. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful years of the assets as follows:

	Years
Buildings	20 - 40
Structures	20
Machinery	5 - 10
Vehicles	7
Others	5 - 10

If the cost of a part of property, plant and equipment is significant compared to the overall total cost of the property, plant and equipment, the cost of the part is separately depreciated from the related property, plant and equipment.

2.14 Property, plant and equipment (cont'd)

The Group reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectation differs from previous estimates, the changes were accounted for as a change in an accounting estimate.

Property, plant and equipment are derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from de-recognition of a property, plant and equipment, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in income or loss when the asset is derecognized.

2.15 Investment properties

The real estate to obtain rental income or capital appreciation are classified as investment properties. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred. Investment properties consist of land which are not depreciated.

Investment properties and any significant part initially recognized are derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on de-recognition of the asset is included in the statement of comprehensive income when the asset is derecognized.

2.16 Intangible assets

Intangible assets acquired separately
Intangible assets with finite useful lives that are acquired separately are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses. Intangible assets are amortized over the estimated useful life using the methods as follows:

	Estimated useful lives	Amortization methods
Software	10 years	Straight-line method
Industrial proprietary rights	5 years	Straight-line method
Mining right	Terms of use	Proportional to output method

Internally generated intangible assets—research and development expenditure
Expenditure on research activities is recognized as an expense in the period in which it is incurred. An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following have been demonstrated:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- The intention to complete the intangible asset and use or sell it;
- The ability to use or sell the intangible asset;
- How the intangible asset will generate probable future economic benefits;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

2.16 Intangible assets (cont'd)

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. When the development expenditure does not meet the criteria listed above, an internally generated intangible asset cannot be recognized and the expenditure is recognized in profit or loss in the period in which it is incurred.

After the initial recognition of the internals generated intangible assets, the asset is subsequently carried at cost less any accumulated amortization and accumulated impairment losses.

Termination of intangible assets
An intangible asset is derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from de-recognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in income or loss when the asset is derecognized.

2.17 Impairment of non-financial assets except for goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets with definite useful lives to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in income or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in income or loss.

2.18 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of inventories, except for those in transit, is measured under the weighted average method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

The carrying amount of inventories sold in the period and the amount of any write-down of inventories to net realizable value and all losses of inventories in the period; less the amount of any reversal in the period of any write-down of the inventories, arising from an increase in net realizable value, are recognized as an expense during the period.

2.19 Provisions

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

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material). Provisions for estimated future costs are discounted using a pre-tax rate that reflects the current market assessment of the time value of money and the risks specific to the liability. Increase in provisions due to passage of time is recognized as finance expense during the period.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

Evaluation of performance incentives
The Ministry of Strategy and Finance conducts an annual performance evaluation on an organization-wide basis for SOE’s and the calculation of individual performance incentives is partly based on such results. The previsions for incentives are provided for in accordance with KIFRS 1037 and recognized as provisions for employee benefits.

2.20 Financial assets

All financial assets are recognized and derecognized on the 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 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 at fair value through profit or loss’ (FVTPL), ‘held-to-maturity investments’, ‘available-for-sale financial assets’ and ‘loans and receivables’. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

2.20.1 Effective interest method

The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts the estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Income is recognized on an effective interest basis for debt instruments other than those financial assets classified as FVTPL.

2.20.2 Financial assets at fair value through profit or loss (FVTPL)

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value, with net changes in fair value presented as finance costs (negative net changes in fair value) or finance income (positive net changes in fair value) in the statement of profit or loss.

Transaction costs related to the acquisition of financial assets at fair value through profit or loss are expensed at initial recognition.

A financial asset is classified as held for trading if:

- It has been acquired principally for the purpose of selling it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- It is a derivative, including an embedded derivative that is not designated and effective as a hedging instrument.

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and its' performance is evaluated on a fair value basis, in accordance with the Group's documented risk
- Management or investment strategy, and information about the grouping is provided internally on that basis; or it forms part of a contract containing one or more embedded derivatives, and KIFRS 1039 *Financial Instruments: Recognition and Measurement* permits the entire combined contract (asset or liability) to be designated as at FVTPL

Financial assets at FVTPL are stated at fair value, with any gains or losses arising on re-measurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset and is included in finance income and finance cost in the consolidated statement of comprehensive income.

2.20.3 Held-to-maturity investments

Financial assets with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortized cost using the effective interest method less any impairment, with revenue recognized on an effective yield basis.

2.20.4 Available-for-sale (AFS) financial assets

Financial assets that are not classified as at held-to-maturity; held-for-trading; designated as FVTPL; or loans and receivables are classified as AFS. Gains and losses arising from changes in fair value are recognized in other comprehensive income and accumulated in the valuation reserve. However, impairment losses, interest calculated using the effective interest method, and foreign exchange gains and losses on monetary assets are recognized in profit or loss. Unquoted equity investments which are not traded in an active market, whose fair value cannot be measured reliably are carried at cost. Where the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the valuation reserve is reclassified to income or loss. Dividends on AFS equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established.

2.20.4 Available-for-sale financial assets (“AFS”) (cont’d)

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 end of the reporting period. The foreign exchange gains and losses that are recognized in profit or loss are determined based on the amortized cost of the monetary asset.

Other foreign exchange gains and losses are recognized in other comprehensive income.

2.20.5 Loans and receivables

Trade receivables, loans, and other receivables that have fixed or determinable payments that are not traded in an active market are classified as ‘loans and receivables’. Loans and receivables are measured at amortized cost using the effective interest method, less any impairment. Interest income is recognized by applying the effective interest rate, except for short-term receivables whose period interest income is immaterial.

2.20.6 Impairment of financial assets

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For listed and unlisted equity investments classified as AFS, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment in addition to the criteria mentioned below.

For all other financial assets, objective evidence of impairment include:

- Significant financial difficulty of the issuer or counterparty; or
- Breach of contract, such as a default or delinquency in interest or principal payments; or
- It becoming probable that the borrower will enter bankruptcy or financial re-organization; or
- The disappearance of an active market for that financial asset because of financial difficulties.

For certain categories of financial asset, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Objective evidence of impairment for a portfolio of receivables could include the Group’s past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period and, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets recorded at amortized cost, the amount of the impairment loss recognized is 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.

For financial assets carried at cost, the amount of the impairment loss is measured as the difference between the asset’s carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss.

When an AFS financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

2.20.6 Impairment of financial assets (cont'd)

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

In respect of AFS equity securities, impairment losses previously recognized in profit or loss are not reversed through profit or loss. Any increase in fair value subsequent to an impairment loss is recognized in other comprehensive income. In respect of AFS debt securities, impairment losses are subsequently reversed through profit or loss if an increase in the fair value of the investment can be objectively related to an event occurring after the recognition of the impairment loss.

2.20.7 De-recognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On de-recognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.

On de-recognition of a financial asset other than in its entirety (e.g., when the Group retains an option to repurchase part of a transferred asset), the Group allocates the previous carrying amount of the financial asset between the part it continues to recognize under continuing involvement, and the part it no longer recognizes on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognized and the sum of the consideration received for the part no longer recognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income is recognized in income or loss. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is no longer recognized on the basis of the relative fair values of those parts.

2.21 Financial liabilities and equity instruments

Classification as debt or equity
Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Equity instruments
An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Group's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in income or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments.

Financial liabilities
Financial liabilities are classified as either financial liabilities at FVTPL or other financial liabilities.

Financial liabilities at FVTPL
Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as FVTPL.

2.21 Financial liabilities and equity instruments (cont'd)

A financial liability is classified as held for trading if:

- It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- It is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and KIFRS 1039 *Financial Instruments: Recognition and Measurement* permits the entire combined contract (asset or liability) to be designated as at FVTPL.

Other financial liabilities
Other financial liabilities are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

Other financial liabilities are initially measured at fair value, net of transaction costs.

The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

2.22 Derivative financial instruments and hedge accounting

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate and foreign exchange rate risk, including interest rate swaps and others.

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently re-measured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in income or loss immediately unless the derivative is designated and effective as a hedging instrument, in such case the timing of the recognition in income or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset; a derivative with a negative fair value is recognized as a financial liability. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

2.22.1 Hedge accounting

The Group designates certain hedging instruments, which include derivatives, embedded derivatives and non-derivatives in respect of foreign currency risk, as either fair value hedges or cash flow hedges. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item.

2.22.2 Cash flow hedges

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 and accumulated under the heading of reverse for gains (losses) on valuation of derivatives. The gain or loss relating to the ineffective portion is recognized immediately in income or loss, and is included in the 'finance income and costs.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to income or loss in the periods when the hedged item is recognized in income or loss, in the same line of the consolidated statement of comprehensive income as the recognized hedged item. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Hedge accounting is discontinued when the Group revokes the hedging relationship, when the hedging instrument expires or is sold, terminated, or exercised, or it no longer qualifies for hedge accounting. Any gain or loss accumulated in equity at that time remains in equity and is recognized when the forecast transaction is ultimately recognized in income or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

3. Significant accounting judgments, estimates and assumptions

The Group makes assumptions and estimates concerning the future. Assumptions and estimations are verified continuously based on the past experience and reasonably expected future event. This accounting estimation, however, could be different from actual results. Assumptions and estimations for significant risks which may cause adjustments to the carrying amounts of assets and liabilities are as follows:

3.1 Taxes

The Group carries on businesses in variety countries and income tax expense coming from operating activities is calculated by the relevant tax laws of different jurisdictions. Accordingly, there are uncertainties to make final tax effect on taxable income. The Group recognized expected corporate tax effect as current corporate tax expense and deferred corporate taxes using the best estimation. Real corporate tax burden, however, may not consist with related assets or liabilities in the future, which may ca*use changes in assets or liabilities at the time of confirmation of corporate tax effect.*

3.2 Fair value of financial instruments

The fair value of financial instruments which does not trade in an active market is principally decided using valuation method. The Group selects various valuation methods and makes a judgment about assumptions based on key market circumstances as at December 31, 2016.

3.3 Provision

The Group recognizes provision for employee performance bonus as a result of assessment in accordance with guidelines from the Ministry of Strategy and Finance (see Note 2.16).

3.4 Pension benefits

The present value of the defined benefit pension can be changed depending on various factors determined using actuarial valuations. Assumptions to determine pension cost (profit) include discount rate, where changes in assumptions will lead changes in present value of the defined benefit pension. The Group has determined discount rate every year end which is defined as interest rate used to decide the present value of expected future cash outflow. The Group determines discount rate considering discount rate of outstanding corporate bond which has similar maturity with the pension obligation. Other assumptions related with the pension obligation are based on market circumstance (see Note 25).

4. Operating segment information

For management purposes, the Group is organized into business units based on their services and has two reportable operating segments. The strategic business units are managed separately as they offer other services and technology, and marketing strategies are different. The Chief Executive Officer reviews an operating results report of each business unit at least biannually.

The reporting segments of the Group are as follows:

	Service
Financing	Capital loans and direct investments in domestic and overseas mining projects
Others	Mineral reserves, mineral exploration and development survey/study/technical guidance/business feasibility

A summary of the Group's financial information by business segment for the years ended December 31, 2016 and 2015 is as follows (Korean won):

	2016			
	Total segment sales	Sales from external customers	Segment operating loss	Depreciation/ amortization
Financing	₩ 308,648,950,098	₩ 308,648,950,098	₩ (255,460,611,515)	₩ 19,622,123,730
Others	21,832,051,650	21,832,051,650	(58,128,441,641)	6,860,270,307
	₩ 330,481,001,748	₩ 330,481,001,748	₩ (313,589,053,156)	₩ 26,482,394,037

(*1) Management of the Group evaluates the performance of each segment based on the segment operating results.

	2015			
	Total segment sales	Sales from external customers	Segment operating loss	Depreciation/ amortization
Financing	₩ 271,561,502,326	₩ 271,561,502,326	₩ (1,102,164,935,996)	₩ 20,680,144,559
Others	26,363,651,029	26,363,651,029	(55,110,390,136)	5,764,898,200
	₩ 297,925,153,355	₩ 297,925,153,355	₩ (1,157,275,326,132)	₩ 26,445,042,759

(*1) Management of the Group evaluates the performance of each segment based on the segment operating results.

Assets and liabilities by business segment as at December 31, 2016 and 2015 are as follows (Korean won):

	2016			
	Segment assets	Investment in associates	Acquisition of non-current assets	Segment liabilities
Financing	₩ 2,853,640,291,478	₩ 992,287,786,010	₩ 472,172,351,019	₩ 5,055,795,655,743
Others	1,512,134,814,368	-	108,387,190,923	150,843,654,694
	₩ 4,365,775,105,846	₩ 992,287,786,010	₩ 580,559,541,942	₩ 5,206,639,310,437

(*1) Assets and liabilities of the reporting segments reported to the Strategic Planning Committee have been derived in the same way with assets and liabilities of the consolidated financial statements and allocated based on sales per segment.

4. Operating segment information (cont'd)

	2015							
	Segment assets		Investment in associates		Acquisition of non-current assets		Segment liabilities	
Financing	₩	2,706,443,425,446	₩	1,080,781,275,955	₩	346,013,365,124	₩	4,387,363,592,134
Others		1,981,037,929,948		-		229,044,723,804		233,201,629,562
	₩	4,687,481,355,394	₩	1,080,781,275,955	₩	575,058,088,928	₩	4,620,565,221,696

(*1) Assets and liabilities of reporting segments reported to the Strategic Planning Committee have been derived in the same way with assets and liabilities of the consolidated financial statements and allocated based on sales per segment.

Details of geographic information on continuing operations and non-current assets for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	Sales from external customers				Non-current assets			
	Dec. 31, 2016		Dec. 31, 2015		Dec. 31, 2016		Dec. 31, 2015	
Korea	₩	282,176,493,085	₩	243,757,993,678	₩	2,324,530,574,883	₩	2,158,474,663,609
Australia		46,398,479,092		39,888,182,347		257,202,016,370		254,575,475,180
Canada		42,597,313		36,595,781		270,431,935,231		340,165,591,788
Bolivia		-		-		1,160,948,595		1,098,142,435
Niger		-		-		120,850		117,200
Singapore		-		2,993,724,631		-		-
Luxembourg		1,863,432,258		11,248,656,918		982,569,332,608		1,423,247,524,515
	₩	330,481,001,748	₩	297,925,153,355	₩	3,835,894,928,537	₩	4,177,561,514,727

The Group has no single customer whose sales represent 10% or more of the Group's total sales for the years ended December 31, 2016 and 2015.

5. Cash and cash equivalents

Cash and cash equivalents presented in the consolidated statement of cash flows includes cash on hand, bank deposits but excludes bank overdrafts. Reconciling adjustments for cash and cash equivalents on the consolidated statements of financial position are as follows (Korean won):

	2016		2015	
Cash and cash equivalents	₩	114,148,798,158	₩	147,913,888,043
Government grants		-		(2,569,145,342)
	₩	114,148,798,158	₩	145,344,742,701

6. Restricted cash and cash equivalents

Cash and cash equivalents restricted in use and financial assets pledged as at December 31, 2016 and 2015 consist of the followings (Korean won):

	Details	2016		2015	
Cash and cash equivalents	Government grants	₩	-	₩	2,569,145,342
Short-term financial instruments	Reserve for environmental restoration		659,809,241		98,584,236
Long-term financial instruments	Employee related liabilities		-		8,184,064
		₩	659,809,241	₩	2,675,913,642

7. Derivatives

Details of derivatives as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Derivative assets:				
Interest rate swaps	₩ -	₩ -	₩ 351,264,046	₩ -
Currency forwards	11,297,815,182	-	-	-
	₩ 11,297,815,182	-	₩ 351,264,046	₩ -
Derivative liabilities:				
Currency swaps (*1)	₩ -	₩ 19,706,740,005	₩ -	₩ 14,857,193,192
	₩ -	₩ 19,706,740,005	₩ -	₩ 14,857,193,192

(*1) Represent amounts related to the bonds issued by Mineray Metalurgica del Boleo ("MMB"), a subsidiary. The Company has provided guarantees for the currency swaps and bonds issued (Note 45).

Details of currency swaps as at December 31, 2016 are as follows (USD, CHF and AUD):

							Contract amount	
	Counterpart	Date of issuance	Maturity	Contract exchange Rate	Sell interest rate (%)	Buy interest rate (%)	Sell	Purchase
Held for trading	Standard Chartered Bank Korea Limited	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 31,512,605	CHF 30,000,000
	The Hongkong and Shanghai Banking Corporation Limited	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 31,512,605	CHF 30,000,000
	BNP Paribas	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 42,016,807	CHF 40,000,000
	Standard Chartered Bank Korea Limited	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 21,250,000	AUD 25,000,000
	The Hongkong and Shanghai Banking Corporation Limited	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 21,250,000	AUD 25,000,000
	BNP Paribas	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 42,500,000	AUD 50,000,000
							USD 190,042,017	CHF 100,000,000 AUD 100,000,000

Details of currency forwards as at December 31, 2016 are as follows (Korean won and USD):

				Contract amount		Contract exchange Rate
	Counterpart	Date of issuance	Maturity	Sell	Purchase	
Held for trading	Kookmin Bank	2016-09-07	2017-01-09	₩109,550,000,000	USD 100,000,000	1,095.5

Details of gain (loss) on derivative transactions for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	Gain (loss) on valuation		Gain (loss) on settlement		Other comprehensive gain (loss)	
	2016	2015	2016	2015	2016	2015
Currency forwards	₩ 11,297,815,182	₩ -	₩ 17,286,600,000	₩ 327,403,688	₩ -	₩ -
Interest rate swaps	-	(8,217,204,099)	(59,201,542)	(1,104,248,569)	(351,264,045)	(347,762,331)
Currency swaps	(4,212,604,556)	-	-	-	-	-
	₩ 7,085,210,626	₩ (8,217,204,099)	₩ 17,227,398,458	₩ (776,844,881)	₩ (351,264,045)	₩ (347,762,331)

8. Trade and other receivables

Details of trade and other receivables as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 8,560,959,079	₩ -	₩ 8,560,959,079
Other receivables	159,031,733,061	(44,609,260,387)	114,422,472,674
Accrued income	10,917,350,944	(8,695,930,602)	2,221,420,342
	178,510,043,084	(53,305,190,989)	125,204,852,095
Non-current assets:			
Other receivables	₩ 4,388,687,780	₩ (4,388,687,780)	₩ -
Deposits	7,930,724,752	-	7,930,724,752
	12,319,412,532	(4,388,687,780)	7,930,724,752
	₩ 190,829,455,616	₩ (57,693,878,769)	₩ 133,135,576,847

	2015		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 1,946,185,799	₩ -	₩ 1,946,185,799
Other receivables	97,560,275,997	(1,159,984,949)	96,400,291,048
Accrued income	5,489,334,051	(537,558,922)	4,951,775,129
	104,995,795,847	(1,697,543,871)	103,298,251,976
Non-current assets:			
Other receivables	₩ 4,388,942,687	₩ (4,388,687,780)	₩ 254,907
Deposits	9,020,710,437	-	9,020,710,437
	13,409,653,124	(4,388,687,780)	9,020,965,344
	₩ 118,405,448,971	₩ (6,086,231,651)	₩ 112,319,217,320

An aging analysis of trade and other receivables as at December 31, 2016 and 2015 is as follows (Korean won):

	2016		2015	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Neither overdue nor impaired	₩ 8,560,959,079	₩ 124,574,617,768	₩ 1,946,185,799	₩ 110,376,290,641
Overdue but not impaired receivables:				
60～90 days	-	-	-	10,593,230
90～120 days	-	-	-	-
Impaired receivables:				
60～90 days	-	-	-	-
90～120 days	-	-	-	-
More than 120 days	-	57,693,878,769	-	6,072,379,301
	8,560,959,079	182,268,496,537	1,946,185,799	116,459,263,172
Less: Allowance for doubtful accounts	-	(57,693,878,769)	-	(6,086,231,651)
	₩ 8,560,959,079	₩ 124,574,617,768	₩ 1,946,185,799	₩ 110,373,031,521

Changes in allowance for doubtful accounts for trade and other receivables for the years ended December 31, 2016 and 2015 are follows (Korean won):

	2016	2015
Beginning	₩ 6,086,231,651	₩ 5,619,198,493
Bad debt expense	49,912,815,718	568,538,112
Elimination of trade and other receivables	(1,228,888)	-
Reversal of unused amounts	(30,746,192)	(101,504,954)
Others	1,726,806,480	-
Ending	₩ 57,693,878,769	₩ 6,086,231,651

The Group considers the change of credit ratings of trade and other receivables to assess their collectability from the date of credit grants to the reporting date. Concentration of credit risk is limited as the Group has numerous clients with no mutual relevance.

9. Available-for-sale financial assets

Details of available-for-sale financial assets as at December 31, 2016 and 2015 are as follows (Korean won):

	2016 (*1)		
	Acquisition cost	Book value	Fair value
Korea Minerals Co., Ltd.	₩ 1,200,000,000	₩ -	₩ -
Global Dynasty Fund (*2)	670,022,234	450,116,513	450,116,513
Troika Fund (*2)	4,669,226,392	339,686,556	339,686,556
SEDEX Minerals Limited	26,157,311,924	-	-
Seah M&S Co., Ltd.	5,995,187,378	1,715,410,246	1,715,410,246
Dongbu Corporation	36,700,000	22,761,510	22,761,510
Investments of Shinhyup	40,000,000	40,000,000	40,000,000
Available-for-sale financial assets owned by KORES Australia Pty. Ltd.	12,764,215,053	308,158,297	308,158,297
Available-for-sale financial assets owned by KORES Canada Corp.	2,482,848,000	56,950,563	56,950,563
Available-for-sale financial assets owned by Niger	120,850	120,850	120,850
	₩ 54,015,631,831	₩ 2,933,204,535	₩ 2,933,204,535

(*1) The amount does not reflect government grants of ₩ 1,373,294,544.
(*2) ₩404,298,080 of an impairment loss on available-for-sale financial assets was recognized for the year ended December 31, 2016.

	2015 (*1)		
	Acquisition cost	Book value	Fair value
Korea Minerals Co., Ltd.	₩ 1,200,000,000	₩ -	₩ -
Global Dynasty Fund	670,022,234	670,022,234	670,022,234
Troika Fund	4,669,226,392	524,078,915	524,078,915
SEDEX Minerals Limited	26,157,311,924	-	-
Seah M&S Co., Ltd.	5,995,187,378	1,715,410,246	1,715,410,246
Dongbu Corporation	-	-	-
Investments of Shinhyup	40,000,000	40,000,000	40,000,000
Available-for-sale financial assets owned by KORES Australia Pty. Ltd.	12,486,843,486	261,923,028	261,923,028
Available-for-sale financial assets owned by KORES Canada Corp.	2,343,654,000	26,473,136	26,473,136
Available-for-sale financial assets owned by Niger	117,200	117,200	117,200
	₩ 53,562,362,614	₩ 3,238,024,759	₩ 3,238,024,759

(*1) The amount does not reflect government grants of ₩ 1,373,294,544.

9. Available-for-sale financial assets (cont'd)

Changes in available-for-sale financial assets as at December 31, 2016 and 2015 are as follows (Korean won):

	2016					
	Jan. 1	Additions	Valuation	Impairment	Others	Dec. 31
Korea Minerals Co., Ltd.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Global Dynasty Fund	670,022,234	-	-	(219,905,721)	-	450,116,513
Troika Fund	524,078,915	-	-	(184,392,359)	-	339,686,556
SEDEX Minerals Limited	-	-	-	-	-	-
Seah M&S Co., Ltd.	1,715,410,246	-	-	-	-	1,715,410,246
Dongbu Corporation	-	-	(13,938,490)	-	36,700,000	22,761,510
Investments of Shinhyup	40,000,000	-	-	-	-	40,000,000
Available-for-sale financial assets owned by KORES Australia Pty. Ltd.	261,923,028	-	40,009,753	-	6,225,516	308,158,297
Available-for-sale financial assets owned by KORES Canada Corp.	26,473,136	-	28,475,189	-	2,002,238	56,950,563
Available-for-sale financial assets owned by Niger	117,200	-	-	-	3,650	120,850
Less: Government grants	(1,373,294,544)	-	-	-	-	(1,373,294,544)
	₩ 1,864,730,215	₩ -	₩ 54,546,452	₩ (404,298,080)	₩ 44,931,404	₩ 1,559,909,991

	2015				
	Jan. 1,	Valuation	Impairment	Others	Dec. 31
Korea Minerals Co., Ltd.	₩ 1,200,000,000	₩ -	₩ (1,200,000,000)	₩ -	₩ -
Global Dynasty Fund	670,022,234	-	-	-	670,022,234
Troika Fund	4,119,887,561	-	(3,595,808,646)	-	524,078,915
SEDEX Minerals Limited	26,157,311,924	-	(26,157,311,924)	-	-
Seah M&S Co., Ltd.	5,995,187,378	-	(4,279,777,132)	-	1,715,410,246
Investments of Shinhyup	40,000,000	-	-	-	40,000,000
Available-for-sale financial assets owned by KORES Australia Pty. Ltd.	796,921,836	-	(12,178,634,567)	11,643,635,759	261,923,028
Available-for-sale financial assets owned by KORES Canada Corp.	95,920,589	(73,180,247)		3,732,794	26,473,136
Available-for-sale financial assets owned by Niger	109,920	-	-	7,280	117,200
Less: Government grants	(8,622,077,544)	-	7,248,783,000	-	(1,373,294,544)
	₩ 30,453,283,898	₩ (73,180,247)	₩ (40,162,749,269)	₩ 11,647,375,833	₩ 1,864,730,215

10. Current and non-current loans

Details of current and non-current loans as at December 31, 2016 and 2015 are as follows (Korean won):

	2016				
	Gross amounts	Allowance for doubtful accounts	Present value discounts	Government grants	Book value
Short-term loans	₩ 108,846,189,488	₩ (7,438,197,830)	₩ (838,663,791)	₩ -	₩ 100,569,327,867
Long-term loans	1,500,046,295,528	(130,825,507,242)	(4,415,301,499)	(2,057,239,365)	1,362,748,247,422
	₩ 1,608,892,485,016	₩ (138,263,705,072)	₩ (5,253,965,290)	₩ (2,057,239,365)	₩ 1,463,317,575,289

	2015				
	Gross amounts	Allowance for doubtful accounts	Present value discounts	Government grants	Book value
Short-term loans	₩ 121,045,030,601	₩ (6,783,290,097)	₩ (186,959,156)	₩ -	₩ 114,074,781,348
Long-term loans	1,203,936,901,961	(27,321,811,016)	(7,627,181,888)	(2,057,239,365)	1,166,930,669,692
	₩ 1,324,981,932,562	₩ (34,105,101,113)	₩ (7,814,141,044)	₩ (2,057,239,365)	₩ 1,281,005,451,040

The aging analysis of loans as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Neither overdue nor impaired	₩ 1,571,158,240,968	₩ 1,312,171,481,899
Overdue but not impaired receivables:		
60～90 days	-	-
90～120 days	-	-
Impaired receivables:		
60～90 days	-	4,250,386,920
90～120 days	-	-
More than 120 days	37,734,244,048	8,560,063,743
	1,608,892,485,016	1,324,981,932,562
Less: Allowance for doubtful accounts	(138,263,705,072)	(34,105,101,113)
Less: Present value discounts account	(5,253,965,290)	(7,814,141,044)
Less: Government grants	(2,057,239,365)	(2,057,239,365)
	₩ 1,463,317,575,289	₩ 1,281,005,451,040

10. Current and non-current loans (cont'd)

Changes in allowance for doubtful accounts for loans for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Beginning	₩ 34,105,101,113	₩ 31,381,788,344
Bad debt expense	2,568,060,015	9,579,104,322
Elimination of loans	(4,048,701,314)	-
Reversal of unused amounts	(1,467,988,808)	(6,921,361,819)
Others	107,107,234,066	65,570,266
Ending	₩ 138,263,705,072	₩ 34,105,101,113

11. Financial instruments

Details of financial instruments as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Deposit	₩ 68,489,119,435	₩ -	₩ 1,481,206,396	₩ 8,184,064

12. Inventories

Details of inventories as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		
	Acquisition cost	Valuation allowance	Book value
Merchandise	₩ 1,946,636,165	₩ -	₩ 1,946,636,165
Supplies	96,475,355,591	(28,647,516,777)	67,827,838,814
	₩ 98,421,991,756	₩ (28,647,516,777)	₩ 69,774,474,979

	2015		
	Acquisition cost	Valuation allowance	Book value
Merchandise	₩ -	₩ -	₩ -
Supplies	135,635,596,629	(27,782,283,543)	107,853,313,086
	₩ 135,635,596,629	₩ (27,782,283,543)	₩ 107,853,313,086

The Group has no loss on valuation recognized in cost of sales for the year ended December 31, 2016.

13. Non-financial assets

Details of non-financial assets as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Advance payments	₩ 3,419,494,203	₩ -	₩ 458,191,204	₩ -
Prepaid expenses	13,990,448,193	-	12,908,968,239	-
Minerals held in reserve	-	222,684,437,016	-	215,817,404,142
Others	-	2,381,891,998	-	2,336,668,608
	₩ 17,409,942,396	₩ 225,066,329,014	₩ 13,367,159,443	₩ 218,154,072,750

14. Investments in associates

Details of investments in associates as at December 31, 2016 and 2015 are as follows (Korean won):

	Principal activity	Country of incorporation	2016 Equity interest (%)	2016 Acquisition cost	2016 Book value
Korea Alumina Co., Ltd. (*1)	Mining	South Korea	-	₩ -	₩ -
GMC (*2)	Mining	South Korea	45.04	3,206,311,852	-
Jungchon Natural Graphite Cooperation	Mining	North Korea	50.00	6,034,005,670	5,978,435,036
YoungWoo Resources Corporation Ltd.	Mining	South Korea	43.53	3,700,000,000	1,933,718,269
Enerchem (*2)	Mining	South Korea	42.50	17,000,000,000	4,898,000,000
Xian Maxun KORES New Material Corporation Ltd.	Mining	China	49.00	6,638,417,887	8,007,341,852
ZhangjiagangWonjin-KORES Industrial Material Corporation Ltd. (*4)	Mining	China	49.00	3,200,922,460	3,174,487,219
ZhangjiagangWonjin-KORES Resources Recovery Reutilization Corporation Ltd. (*4)	Mining	China	49.00	3,765,957,522	4,399,793,447
Zhangjiagang Anhuisunglayong	Mining	China	25.00	801,509,961	656,471,178
AnhuishengWonjinJinyuan Calcium Industry Corporation Ltd.	Mining	China	25.00	1,259,109,320	1,228,137,841
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	Mining	China	48.33	16,144,378,111	-
AMSA/DMSA (Ambatovy) (*3)	Mining	Madagascar	22.50	1,344,606,469,365	388,712,786,287
Korean Boleo Corpration on S.A. de C.V.	Mining	Mexico	46.92	50,299,671,693	5,674,449,846
United Copper & Moly LLC	Mining	U.S.A	50.00	39,530,895,971	40,458,285,784
Saldevida Korea	Mining	South Korea	33.33	6,300,000,000	-
Philco Resources Ltd.	Mining	Malaysia	40.00	325,934,829	348,882,730
K.K Lao Mining Company (*2)	Mining	Laos	50.00	787,652,372	-
Haein Resources	Mining	South Korea	49.00	3,087,000,000	-
KPMC	Mining	Panama	50.00	265,170,658,847	230,544,314,747
Capstone (*2)	Mining	Canada	10.58	196,073,143,534	97,034,268,150
KCMC (*2)	Mining	Canada	30.00	232,429,149,328	139,574,499,000
Springvale SK Kores Pty Ltd.	Mining	Australia	50.00	48,641,284,222	107,093,253,711
PT. DDS (*1)	Mining	Indonesia	-	-	-
Mkuze	Mining	Tanzania	28.00	2,260,744,831	-
PT. KCT (*2)	Mining	Indonesia	24.00	473,949,000	-
				₩ 2,251,737,166,775	1,039,717,125,097
Government grants					(47,429,339,087)
					₩ 992,287,786,010

	Principal activity	Country of incorporation	2015 Equity interest (%)	2015 Acquisition cost	2015 Book value
Korea Alumina (*1)	Mining	South Korea	-	₩ -	₩ -
GMC (*2)	Mining	South Korea	45.04	3,206,311,852	-
Jungchon Natural Graphite Cooperation	Mining	North Korea	50.00	6,034,005,670	5,978,435,036
YoungWoo Resources Corporation Ltd.	Mining	South Korea	43.53	3,700,000,000	2,487,379,306
Enerchem (*2)	Mining	South Korea	42.50	17,000,000,000	9,045,115,666
Xian Maxun KORES New Material Corporation Ltd.	Mining	China	49.00	6,638,417,887	9,965,531,156
ZhangjiagangWonjin-KORES Industrial Material Corporation Ltd. (*4)	Mining	China	49.00	6,401,844,921	5,058,945,920
ZhangjiagangWonjin-KORES Resources Recovery Reutilization Corporation Ltd. (*4)	Mining	China	49.00	7,531,915,044	7,032,690,054
Zhangjiagang Anhuisunglayong	Mining	China	25.00	801,509,961	659,740,648
AnhuishengWonjinJinyuan Calcium Industry Corporation Ltd.	Mining	China	49.02	1,259,109,320	1,433,113,295
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	Mining	China	48.33	16,144,378,111	-
AMSA/DMSA (Ambatovy)(*3)	Mining	Madagascar	22.50	1,210,119,469,365	360,705,736,800
Korean Boleo Corpration on S.A. de C.V.	Mining	Mexico	46.92	50,050,214,341	67,077,275,837
United Copper & Moly LLC	Mining	U.S.A	50.00	39,524,927,940	39,258,637,550
Saldevida Korea	Mining	South Korea	33.33	6,300,000,000	-
Philco Resources Ltd.	Mining	Malaysia	40.00	325,934,829	339,696,859
K.K Lao Mining Company (*2)	Mining	Laos	50.00	763,454,372	235,887,450
Haein Resources	Mining	South Korea	49.00	3,087,000,000	-
KPMC	Mining	Panama	50.00	265,166,697,570	223,270,163,320
Capstone (*2)	Mining	Canada	10.58	196,073,143,534	96,020,282,868
KCMC (*2)	Mining	Canada	30.00	232,429,149,328	197,504,828,216
Springvale SK Kores Pty Ltd.	Mining	Australia	50.00	48,641,284,222	105,916,172,914
PT. DDS (*1)	Mining	Indonesia	-	-	-
Mkuze	Mining	Tanzania	28.00	2,260,744,831	-
PT. KCT (*2)	Mining	Indonesia	24.00	473,949,000	-
				₩ 2,123,933,462,098	1,131,989,632,895
Government grants					(51,208,356,940)
					₩ 1,080,781,275,955

(*1) The investment was reclassified as assets held-for-sale during the prior reporting period (See Note 49).
(*2) An impairment loss of ₩2,948,993,698 (2015: ₩94,884,246,301) was recognized during the current reporting period.
(*3) Loans of ₩134,487,000,000(2015: ₩382,109,400,000) were converted into equity during the current reporting period.
(*4) The contribution amount of the Group has been recovered due to a capital reduction with consideration during the current reporting period.

14. Investments in associates (cont'd)

Changes in investment in associates for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016							
	January 1	Additions (disposal)	Dividends received	Loss on valuation	Share of profit (loss)	Changes in equity adjustments in equity method	Others	December 31.
Korea Alumina	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
GMC	-	-	-	-	-	-	-	-
Jungchon Natural Graphite Cooperation (*1)	5,978,435	-	-	-	-	-	-	5,978,435
YoungWoo Resources Corporation Ltd.	2,487,379	-	-	-	(553,661)	-	-	1,933,718
Enerchem	9,045,116	-	-	(2,929,068)	(1,218,048)		-	4,898,000
Xian Maxun KORES New Material Corporation Ltd.	9,965,531	-	-	-	(1,715,916)	(92,631)	(149,642)	8,007,342
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	5,058,946	(1,301,239)	(108,326)	-	128,976	(603,869)	-	3,174,487
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	7,032,690	(1,951,836)	-	-	208,612	(889,672)	-	4,399,793
Zhangjiagang Anhuisung-layong	659,741	-	-	-	16,131	(19,401)	-	656,471
Anhuisheng Wonjin Jinyuan Calcium Industry Corporation Ltd.	1,433,113	(111,726)	-	-	(98,197)	4,947	-	1,228,138
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	-	-	-	-	-	-	-	-
AMSA/DMSA (Ambatovy)	360,705,737	134,487,000	-	-	(113,510,829)	10,580,178	(3,549,300)	388,712,786
Korean Boleo Corpration on S.A. de C.V.	67,077,276	249,457	-	-	(64,777,516)	3,125,233	-	5,674,450
United Copper & Moly LLC	39,258,638	5,968	-	-	(28,126)	1,221,806	-	40,458,286
Saldebida Korea	-	-	-	-	-	-	-	-
Philco Resources Ltd.	339,697	-	-	-	(1,338)	10,524	-	348,883
K.K.LaoMining Co.	235,887	24,198	-	(19,926)	(157,962)	(2,122)	(80,076)	-
Haein Resource Corporation	-	-	-	-	-	-	-	-
KPMC	223,270,163	3,961	-	-	303,469	6,966,722	-	230,544,315
Capstone	96,020,283	-	-	-	(2,491,365)	593,459	2,911,891	97,034,268
KCMC	197,504,828	-	-	-	(61,404,815)	(131,251)	3,605,737	139,574,499
Springvale SK Kores Pty Ltd	105,916,173	-	-	-	(1,163,796)	-	2,340,877	107,093,254
PT. DDS	-	-	-	-	-	-	-	-
Mukuze	-	-	-	-	-	-	-	-
PT. KCT	-	-	-	-	-	-	-	-
	₩ 1,131,989,633	₩ 131,405,784	₩ (108,326)	₩ (2,948,994)	₩ (246,464,380)	₩ 20,763,921	₩ 5,079,487	₩ 1,039,717

13. Investments in associates (cont'd)

	2015							
	January 1	Additions (disposal)	Dividends received	Loss on valuation	Share of profit (loss)	Changes in equity adjustments in equity method	Others	December 31.
Korea Alumina	₩ 10,718,077	₩ -	₩ -	₩ -	₩ (369,386)	₩ -	₩ (10,348,691)	₩ -
GMC	920,566	94,600	-	(591,733)	(423,433)	-	-	-
Jungchon Natural Graphite Cooperation (*1)	5,978,435	-	-	-	-	-	-	5,978,435
YoungWoo Resources Corporation Ltd.	3,139,348	-	-	-	(651,969)	-	-	2,487,379
Enerchem	14,525,685	-	-	-	(5,480,570)	-	-	9,045,116
Xian Maxun KORES New Material Corporation Ltd.	10,870,875	-	-	-	(903,679)	108,325	(109,990)	9,965,531
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	5,173,004	-	(289,352)	-	119,642	55,651	-	5,058,946
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	8,248,779	-	(1,013,414)	-	(324,720)	122,044	-	7,032,690
Zhangjiagang Anhuisung-layong	731,003	-	-	-	(78,605)	7,342	-	659,741
Anhuisheng Wonjin Jinyuan Calcium Industry Corporation Ltd.	1,982,982	-	(341,826)	-	146,717	(354,760)	-	1,433,113
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	-	11,414,102	-	-	(11,414,102)	-	-	-
AMSA/DMSA (Ambatovy)	679,543,852	382,109,400	-	-	(709,348,029)	43,663,613	(35,263,099)	
Korean Boleo Corpration on S.A. de C.V.	87,558,812	-	-	-	(34,345,246)	13,863,710	-	67,077,276
United Copper & Moly LLC	37,996,597	11,767	-	-	(1,222,389)	2,472,663	-	
Saldebida Korea	-	-	-	-	-	-	-	-
Philco Resources Ltd.	325,088	-	-	-	(6,682)	21,291	-	339,697
K.K.LaoMining Co.	253,353	33,234	-	-	(42,571)	16,307	(24,436)	235,887
Haein Resource Corporation	-	-	-	-	-	-	-	-
KPMC	209,540,022	22,287	-	-	80,473	13,627,381	-	223,270,163
Capstone	184,887,234	-	-	(19,082,708)	(76,145,537)	(2,388,863)	8,750,157	96,020,283
KCMC	311,549,150	-	-	(74,737,288)	(55,662,519)	376,722	15,978,764	197,504,828
Springvale SK Kores Pty Ltd	126,581,921	-	-	-	(14,137,136)	-	(6,528,612)	105,916,173
PT. DDS	24,571,124	(12,644,974)	-	-	(2,973)	-	(11,923,175)	-
Mukuze	-	-	-	-	-	-	-	-
PT. KCT	459,033	-	-	(472,517)	-	-	13,485	-
	₩ 1,725,554,940	₩ 381,040,416	₩ (1,644,592)	₩ (94,884,246)	₩ (910,212,714)	₩ 71,591,426	₩ (39,455,597)	₩ 1,131,989,633

(*1) As the change in equity interest was not significant, gain or loss on valuation of investments under the equity method was not recognized.

14. Investments in associates (cont'd)

The summary of financial information of the Group's associates as at December 31, 2016 and 2015 are as follows (Korean won):

	2016			
	Total assets	Total liabilities	Revenue	Profit (loss) for the year
GMC	₩ 289,347,300	₩ 7,592,451	₩ -	₩ (54,180,537)
YoungWoo Resources Corporation Ltd.	13,921,136,444	9,478,870,722	5,752,166,102	(1,477,935,850)
Enerchem	38,999,812,236	21,723,368,671	102,913,000	(2,513,322,542)
Xian Maxun KORES New Material Corporation Ltd.	27,963,774,174	11,622,260,191	9,614,548,188	(3,807,261,296)
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	14,559,303,300	8,080,757,956	15,804,899,125	241,833,830
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	18,868,152,285	9,888,981,986	17,224,582,829	196,023,861
Zhangjiagang Anhuisunglayong	3,474,735,978	848,851,266	3,579,061,968	64,525,574
Anhuisheng WonjinJinyuan Calcium Industry Corporation Ltd.	6,907,730,324	1,995,178,959	3,770,668,491	(392,787,904)
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	21,322,322,449	58,438,642,650	1,692,015,444	(2,853,056,501)
AMSA/DMSA (Ambatovy)	6,570,172,189,000	4,842,559,805,500	603,698,924,000	(520,267,236,500)
Korean Boleo corp on S.A. de C.V.	384,583,007,367	139,774,183,081	-	(138,059,497,245)
United Copper & Moly LLC	80,920,922,167	4,350,600	-	(56,252,348)
Saldebida Korea	774,789,237	6,452,000	-	543,254,203
Philco Resources Ltd.	899,016,480	26,809,654	5,752,865	(3,345,199)
K.K. Lao Mining Co.	61,280,123	1,812,750	-	(456,460,301)
Haein Resource Corporation	3,753,089,109	20,848,096,559	298,304,724	(1,348,040,313)
KPMC	1,157,109,590,104	696,020,960,610	572,120,698	564,138,779
Capstone	1,875,608,919,000	671,063,131,000	532,021,941,000	(39,998,953,500)
KCMC	701,919,761,500	7,499,951,000	-	(2,153,888,000)
Springvale SK Kores Pty Ltd.	419,937,979,023	205,751,471,602	110,766,533,876	(2,327,592,253)
Mukuze	30,741,267	9,063,750	-	-
PT. KCT	16,795,861,778	717,358,700	-	(403,389,881)
	₩ 11,358,873,460,645	₩ 6,706,367,951,658	₩ 1,304,904,432,310	₩ (714,563,423,923)

	2015			
	Total assets	Total liabilities	Revenue	Profit (loss) for the year
GMC	₩ 338,128,932	₩ 2,193,546	₩ -	₩ (940,289,469)
YoungWoo Resources Corporation Ltd.	14,192,050,578	8,477,878,040	6,389,534,791	(1,466,495,493)
Enerchem	39,216,129,002	19,073,690,262	-	(12,505,288,119)
Xian Maxun KORES New Material Corporation Ltd.	28,593,398,566	8,255,579,881	2,562,979,707	(2,068,711,368)
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	16,323,756,853	5,999,377,426	21,241,663,106	200,963,314
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	19,728,935,091	5,376,506,410	18,330,445,119	(1,193,564,613)
Zhangjiagang Anhuisunglayong	3,425,167,405	786,204,812	3,773,262,708	(314,420,855)
Anhuisheng WonjinJinyuan Calcium Industry Corporation Ltd.	9,186,119,587	6,262,591,853	6,691,851,523	299,301,053
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	28,785,163,009	64,109,377,590	10,726,479,192	(38,207,604,275)
AMSA/DMSA (Ambatovy)	6,415,380,328,000	4,812,243,720,000	737,728,085,530	(3,309,343,481,340)
Korean Boleo corp on S.A. de C.V.	408,635,102,236	32,959,214,884	-	(73,199,586,667)
United Copper & Moly LLC	78,521,494,299	4,219,200	-	(2,444,778,162)
Saldebida Korea	231,292,034	6,210,000	-	(11,821,920)
Philco Resources Ltd.	31,182,165,876	30,332,923,729	-	(16,705,646)
K.K. Lao Mining Co.	471,774,899	-	-	(134,012,793)
Haein Resource Corporation	4,269,736,392	20,061,125,624	461,190,000	(2,070,531,870)
KPMC	903,603,910,142	457,063,583,503	-	(339,934,525)
Capstone	1,890,716,108,000	684,642,552,000	529,441,143,350	(302,034,283,150)
KCMC	690,492,004,000	14,428,492,000	-	(185,541,730,200)
Springvale SK Kores Pty Ltd.	393,931,034,004	182,098,688,184	106,940,671,526	(28,142,050,609)
Mukuze	29,812,797	8,790,000	-	(16,370,918)
PT. KCT	1,458,934,559	57,973,658	-	(23,619,367)
	₩ 10,978,712,546,261	₩ 6,352,250,892,602	₩ 1,444,287,306,552	₩ (3,959,515,016,992)

15. Investments in joint ventures

Details of investments in joint ventures as at December 31, 2016 and 2015 are as follows (Korean won):

2016	Key operation	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Minerva	Mining	Australia	4.00	₩ 8,559,591,659	₩ 18,299,027
Moolarben	Mining	Australia	4.00	67,137,958,978	28,012,562,374
Athena	Mining	Australia	4.00	1,757,356,156	272,863,224
White Cliff	Mining	Australia	25.00	1,914,917,296	-
Marree(*1)	Mining	Australia	18.72	1,281,070,250	-
Boulia	Mining	Australia	33.33	1,944,836,346	-
Narrabri	Mining	Australia	2.50	64,041,514,923	20,557,413,526
Togara North	Mining	Australia	8.33	1,778,016,937	-
KLS	Mining	Peru	50.00	45,449,596,702	33,730,438,666
Cree East	Mining	Canada	12.50	10,166,743,000	24,644,941
Ultimatum Challenge Trading 36 (Pty) Ltd.	Mining	South Africa	37.00	13,570,934,000	-
				₩ 217,602,536,247	82,616,221,758
Government grants					(34,889,005,146)
					₩ 47,727,216,612

(*1) Impairment loss on equity investment in a joint venture ₩757,746,363 was recognized during the current reporting period.

2015	Key operation	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Minerva	Mining	Australia	4.00	₩ 8,559,591,659	₩ 757,825,792
Moolarben	Mining	Australia	4.00	66,051,423,737	26,330,090,599
Athena	Mining	Australia	4.00	1,755,167,964	264,771,358
White Cliff	Mining	Australia	25.00	1,914,917,296	-
Marree	Mining	Australia	18.72	1,281,070,250	749,190,364
Boulia	Mining	Australia	33.33	1,944,836,346	-
Narrabri	Mining	Australia	2.50	63,496,714,697	19,572,304,309
Togara North	Mining	Australia	8.33	1,778,016,937	-
KLS	Mining	Peru	50.00	43,516,522,839	46,567,876,476
Cree East	Mining	Canada	12.50	10,166,743,000	32,612,072
Ultimatum Challenge Trading 36 (Pty) Ltd.	Mining	South Africa	37.00	13,570,934,000	-
				₩ 214,035,938,725	94,274,670,970
Government grants					(34,889,005,146)
					₩ 59,385,665,824

16. Property, plant and equipment

Details of property, plant and equipment as at December 31, 2016 and 2015 are as follows (Korean won):

2016	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment losses	Book value
Land	₩ 35,415,645,648	₩ (538,934,740)	₩ -	₩ (1,161,986,690)	₩ 33,714,724,218
Buildings	136,681,113,666	(5,509,545,112)	(15,170,615,509)	-	116,000,953,045
Structures	1,344,735,870	(312)	(518,197,100)	-	826,538,458
Machinery	183,914,714,951	(1,900,427,125)	(105,300,924,092)	-	76,713,363,734
Vehicles	1,792,844,785	(6,117,720)	(1,128,672,202)	-	658,054,863
Construction in progress	2,378,767,631,339	-	-	(1,604,263,986,310)	774,503,645,029
Others	20,881,445,842	(2,793,285,106)	(6,465,956,329)	-	11,622,204,407
	₩ 2,758,798,132,101	₩ (10,748,310,115)	₩ (128,584,365,232)	₩ (1,605,425,973,000)	₩ 1,014,039,483,754

2015	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment losses	Book value
Land	₩ 35,102,688,480	₩ (538,934,740)	₩ -	₩ (1,136,736,248)	₩ 33,427,017,492
Buildings	129,059,139,424	(358,496,309)	(10,505,611,141)	-	118,195,031,974
Structures	1,337,395,870	(416)	(462,722,790)	-	874,672,664
Machinery	123,894,708,122	(676,186,808)	(85,287,342,995)	-	37,931,178,319
Vehicles	2,206,470,213	(9,030,070)	(1,239,794,160)	-	957,645,983
Construction in progress	2,218,825,886,479	(2,904,640,748)	-	(978,836,631,708)	1,237,084,614,023
Others	17,929,582,532	(24,471,092)	(4,553,667,952)	-	13,351,443,488
	₩ 2,528,355,871,120	₩ (4,511,760,183)	₩ (102,049,139,038)	₩ (979,973,367,956)	₩ 1,441,821,603,943

16. Property, plant and equipment (cont'd)

Changes in property, plant and equipment for the years ended December 31, 2016 and 2015 are as follows (Korean won):

2016	January 1	Acquisition/additions	Disposals	Depreciation	Impairment	Others	December 31
Land	₩ 33,965,952,232	₩ -	₩ -	₩ -	₩ -	₩ 287,706,726	₩ 34,253,658,958
Government grants	(538,934,740)	-	-	-	-	-	(538,934,740)
Buildings	118,553,528,283	3,051,983,425	-	(4,337,388,929)	-	4,242,375,378	121,510,498,157
Government grants	(358,496,309)	(2,287,096,386)	-	40,688,331	-	(2,904,640,748)	(5,509,545,112)
Structures	874,673,080	7,340,000	-	(55,474,310)	-	-	826,538,770
Government grants	(416)	-	-	104	-	-	(312)
Machinery	38,607,365,127	19,540,545,267	-	(17,058,811,944)	-	37,524,692,409	78,613,790,859
Government grants	(676,186,808)	(1,384,853,376)	-	160,613,059	-	-	(1,900,427,125)
Vehicles	966,676,053	50,916,600	(159,575,872)	(195,393,517)	-	1,549,319	664,172,583
Government grants	(9,030,070)	-	-	2,912,350	-	-	(6,117,720)
Construction in progress	1,239,989,254,771	76,473,247,809	-	-	(561,211,765,951)	19,252,908,400	774,503,645,029
Government grants	(2,904,640,748)	-	-	-	-	2,904,640,748	-
Others	13,375,914,580	3,315,097,483	(32,446,207)	(2,244,453,590)	-	1,377,247	14,415,489,513
Government grants	(24,471,092)	(2,848,458,859)	-	79,644,845	-	-	(2,793,285,106)
	₩ 1,441,821,603,943	₩ 95,918,721,963	₩ (192,022,079)	₩ (23,607,663,601)	₩ (561,211,765,951)	₩ 61,310,609,479	₩ 1,014,039,483,754

2015	January 1	Acquisition/additions	Disposals	Depreciation	Impairment	Others	December 31
Land	₩ 56,595,228,017	₩ 282,388,384	₩ (22,213,425,000)	₩ -	₩ -	₩ (698,239,169)	₩ 33,965,952,232
Government grants	(538,934,740)	-	-	-	-	-	(538,934,740)
Buildings	47,383,607,614	40,051,012,227	(1,693,324,698)	(3,043,608,135)	-	35,855,841,275	118,553,528,283
Government grants	(380,347,689)	-	-	21,851,380	-	-	(358,496,309)
Structures	1,020,657,077	124,978,855	(297,542,139)	(69,070,557)	-	95,649,844	874,673,080
Government grants	(520)	-	-	104	-	-	(416)
Machinery	141,124,699,809	2,057,931,094	(128,769,764)	(23,530,192,063)	-	(80,916,303,949)	38,607,365,127
Government grants	(812,400,627)	(8,340,000)	182,771	144,371,048	-	-	(676,186,808)
Vehicles	939,682,191	312,827,240	(9,828,282)	(274,758,281)	-	(1,246,815)	966,676,053
Government grants	(37,814,883)	(1,000,000)	-	29,784,813	-	-	(9,030,070)
Construction in progress	1,841,859,092,431	168,102,331,099	-	-	(941,535,246,976)	171,563,078,217	1,239,989,254,771
Government grants	-	(2,904,640,748)	-	-	-	-	(2,904,640,748)
Others	4,475,193,112	10,478,922,107	(651,886,331)	(1,328,380,617)	-	402,066,309	13,375,914,580
Government grants	(29,455,015)	(420,000)	126,844	5,277,079	-	-	(24,471,092)
	₩ 2,091,599,206,777	₩ 218,495,990,258	₩ (24,994,466,599)	₩ (28,044,725,229)	₩ (941,535,246,976)	₩ 126,300,845,712	₩ 1,441,821,603,943

16. Property, plant and equipment (cont'd)

Insured assets

Details of assets insured for the year ended December 31, 2016 and 2015 are as follows (Korean won):

	2016		
	Company	Insured amounts	Insurance period
Comprehensive insurance	Heungkuk Insurance Corporation Ltd.	₩ 262,185,605,450	2016-07-29 ~ 2017-07-28
Fire insurance	KB Insurance Corporation Ltd.	89,367,412,760	2016-07-05 ~ 2017-07-05
Gas accident liability insurance	Dongbu Insurance Corporation Ltd.	880,000,000	2016-04-14 ~ 2017-10-14
		₩ 352,433,018,210	

	2015		
	Company	Insured amounts	Insurance period
Comprehensive insurance	Heungkuk Insurance Corporation Ltd.	₩ 228,216,676,000	2015-07-29 ~ 2016-07-29
Fire insurance	KB Insurance Corporation Ltd.	83,400,000,000	2015.06.24 ~ 2016.06.24
Gas accident liability insurance	Dongbu Insurance Corporation Ltd.	2,000,000,000	2015.04.14 ~ 2016.04.14
		₩ 313,616,676,000	

17. Investment properties

Details of investment properties for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Acquisition cost	Book value	Acquisition cost	Book value
Land	₩ 2,250,665,125	₩ 2,250,665,125	₩ 2,201,757,259	₩ 2,201,757,259

Changes in investment properties for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016			2015		
	Acquisition cost	Others	December 31	Acquisition cost	Others	December 31
Land	₩ 2,201,757,259	₩ 48,907,866	₩ 2,250,665,125	₩ 2,320,452,390	₩ (118,695,131)	₩ 2,201,757,259

Details of rental income from investment properties for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Rental income	₩ 85,327,036	₩ 79,364,158

18. Goodwill

Details of goodwill as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Acquisition cost	₩ 19,770,333,568	₩ 19,770,333,568
Accumulated impairment losses	(17,068,723,618)	(17,068,723,618)
Book value	₩ 2,701,609,950	₩ 2,701,609,950

Changes in the book value of goodwill for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ 2,701,609,950	₩ 2,701,609,950
Additions	-	-
As at December 31	₩ 2,701,609,950	₩ 2,701,609,950

18. Goodwill (cont'd)

Changes in accumulated impairment losses on goodwill for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ 17,068,723,618	₩ 17,068,723,618
Additions	-	-
As at December 31	₩ 17,068,723,618	₩ 17,068,723,618

19. Other intangible assets

Details of other intangible assets as at December, 2016 and 2015 are as follows (Korean won):

2016	Acquisition cost	Government grants	Accumulated amortization	Accumulated impairment losses	Book value
Exploration and evaluation assets	₩ 54,983,896,025	₩ (15,481,260,655)	₩ -	₩ (12,903,951,176)	₩ 26,598,684,194
Software	14,714,568,895	-	(6,594,528,804)	-	8,120,040,091
Industrial property rights	6,546,000	-	(6,546,000)	-	-
Mining right	2,017,050	-	-	-	2,017,050
Other intangible assets	75,283,572,700	-	(8,846,296,527)	(24,895,605,012)	41,541,671,161
	₩ 144,990,600,670	₩ (15,481,260,655)	₩ (15,447,371,331)	₩ (37,799,556,188)	₩ 76,262,412,496

2015	Acquisition cost	Government grants	Accumulated amortization	Accumulated impairment losses	Book value
Exploration and evaluation assets	₩ 54,983,896,025	₩ (15,481,260,655)	₩ -	₩ (12,592,927,995)	₩ 20,571,233,204
Software	13,995,013,223	-	(5,244,915,053)	-	8,750,098,170
Industrial property rights	6,546,000	-	(6,546,000)	-	-
Mining right	2,017,050	-	-	-	2,017,050
Other intangible assets	73,821,914,142	-	(7,321,179,842)	(23,210,480,039)	43,290,254,261
	₩ 136,470,912,269	₩ (15,481,260,655)	₩ (12,572,640,895)	₩ (35,803,408,034)	₩ 72,613,602,685

Changes in other intangible assets for the years ended December 31, 2016 and 2015 are as follows (Korean won):

2016	January 1	Acquisition/additions	Disposals	Amortization	Impairment	Others	December 31
Exploration and evaluation assets	₩ 36,052,493,859	₩ 5,228,504,667	₩ -	₩ -	₩ -	₩ 798,946,323	₩ 42,079,944,849
Government grants	(15,481,260,655)	-	-	-	-	-	(15,481,260,655)
Software	8,750,098,170	719,555,672	-	(1,349,613,751)	-	-	8,120,040,091
Mining rights	2,017,050	-	-	-	-	-	2,017,050
Others	43,290,254,261	-	-	(1,525,116,685)	(1,157,759,448)	934,293,033	41,541,671,161
	₩ 72,613,602,685	₩ 5,948,060,339	₩ -	₩ (2,874,730,436)	₩ (1,157,759,448)	₩ 1,733,239,356	₩ 76,262,412,496

2015	January 1	Acquisition/additions	Disposals	Amortization	Impairment	Others	December 31
Exploration and evaluation assets	₩ 43,515,521,131	₩ 3,649,741,313	₩ -	₩ -	₩ (9,641,633,409)	₩ (1,471,135,176)	₩ 36,052,493,859
Government grants	(15,276,280,853)	(204,979,802)	-	-	-	-	(15,481,260,655)
Software	5,984,293,817	3,984,591,485	(129,064,939)	(1,089,722,193)	-	-	8,750,098,170
Mining rights	2,017,050	-	-	-	-	-	2,017,050
Others	72,621,296,492	-	-	(2,396,748,923)	(23,122,600,716)	(3,811,692,592)	43,290,254,261
	₩ 106,846,847,637	₩ 7,429,352,996	₩ (129,064,939)	₩ (3,486,471,116)	₩ (32,764,234,125)	₩ (5,282,827,768)	₩ 72,613,602,685

19. Financial liabilities

Details of financial liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Short-term borrowings	₩ 353,488,200,000	₩ -	₩ 385,015,200,000	₩ -
Long-term borrowings	156,442,137,702	615,992,576,588	61,473,157,952	645,933,565,539
Borrowings from Special Account for Energy and Resources, net (*1)	-	15,772,850,013	-	15,493,786,987
Bonds payable	-	3,777,233,422,046	539,081,961,240	2,585,115,826,580
Derivative liabilities	-	19,706,740,005	-	14,857,193,192
Others	-	63,448,895,092	-	67,558,289,537
	₩ 509,930,337,702	₩ 4,492,154,483,744	₩ 985,570,319,192	₩ 3,328,958,661,835

(*1) Borrowings from Special Account for Energy and Resources are net amount of loans and borrowings.

20. Trade and other payables

Details of trade and other payable as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Trade payables	₩ 86,697,098	₩ 1,272,750,540
Other payables	23,913,075,850	52,401,479,639
Accrued expenses	29,711,061,349	19,160,380,928
	₩ 53,710,834,297	₩ 72,834,611,107

21. Borrowings and bonds payable

Details of borrowings and bonds payable as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Current liabilities:		
Short-term borrowings	₩ 353,488,200,000	₩ 385,015,200,000
Current portion of long-term borrowings	156,442,137,702	61,473,157,952
Current portion of bonds payable	-	539,120,000,000
Less: present value discount	-	(38,038,760)
	509,930,337,702	985,570,319,192
Non-current liabilities:		
Long-term borrowings (*1)	615,992,576,588	645,933,565,539
Bonds payable	3,792,723,000,000	2,599,169,000,000
Less: present value discount	(15,489,577,954)	(14,053,173,420)
	4,393,225,998,634	3,231,049,392,119
	₩ 4,903,156,336,336	₩ 4,216,619,711,311

(*1) Long-term borrowings exclude borrowings from the Special Account for Energy and Resources**.**

The repayment schedules of loans are as follows (Korean won):

	2016		
	Loans	Bonds	Total
Within 1 year	₩ 509,930,337,702	₩ -	₩ 509,930,337,702
After 1 year but no later than 5 years	546,570,938,886	3,302,723,000,000	3,849,293,938,886
Later than 5 years	69,421,637,702	490,000,000,000	559,421,637,702
	₩ 1,125,922,914,290	₩ 3,792,723,000,000	₩ 4,918,645,914,290

	2015		
	Loans	Bonds	Total
Within 1 year	₩ 446,488,357,952	₩ 539,120,000,000	₩ 985,608,357,952
After 1 year but no later than 5 years	578,426,407,586	2,089,169,000,000	2,667,595,407,586
Later than 5 years	67,507,157,953	510,000,000,000	577,507,157,953
	₩ 1,092,421,923,491	₩ 3,138,289,000,000	₩ 4,230,710,923,491

22. Borrowings and bonds payable (cont'd)

Details of short-term borrowings as at December 31, 2016 and 2015 are as follows (Korean won):

	Financial institution	Annual interest rate	Maturity	2016	2015
Short-term borrowings	Kookmin Bank	2.50%	2017-01-20	₩ 100,000,000,000	₩ -
	Woori Bank	2.73%	2017-02-23	30,000,000,000	-
	KEB Hana Bank	2.74%	2017-02-23	150,000,000,000	-
	Standard Chartered Bank	2.70%	2017-02-23	70,000,000,000	-
	Citibank	-	2016-04-06	-	100,000,000,000
	Woori Bank	-	2016-05-03	-	150,000,000,000
	Kookmin Bank	-	2016-05-10	-	120,000,000,000
	HSBC	-	2016-04-09	-	11,602,800,000
	Woori Bank	-	2016-03-04	-	3,412,400,000
	Woori Bank	3.31%	2017-11-20	3,488,200,000	-
				₩ 353,488,200,000	₩ 385,015,200,000

Details of long-term borrowings as at December 31, 2016 and 2015 are as follows (Foreign currency in units and Korean won):

	Financial institution	Annual interest rate	Maturity	2016 Foreign currencies		2016 Equivalent Korean won
Long-term borrowings in KRW	Ministry of Unification	2.00%	2026-06-18		-	₩ 6,034,000,000
Long-term borrowings in foreign currency	US-EXIM (*1)	3.02%	2022-12-18	USD	94,782,730	114,544,929,519
	US-EXIM (*1)	2.12%	2022-12-18	USD	219,926,269	265,780,896,666
	HSBC	Libor (3M) +0.60%	2017-09-04	USD	77,000,000	93,054,500,000
	Baha funding loan	Libor (3M) +3.5%	2020-09-07	USD	41,166,990	49,750,306,813
	Equity loan	10.00%	2020-09-07	USD	122,277,448	147,772,296,158
	Equity loan	4.00%	2018-12-31	USD	79,021,750	95,497,785,134
				USD	634,175,187	772,434,714,290
Less: current portion						(156,442,137,702)
						₩ 615,992,576,588

	Financial institution	Annual interest rate	Maturity	2015 Foreign currencies		2015 Equivalent Korean won
Long-term borrowings in KRW	Ministry of Unification	2.00%	2026-06-18		-	₩ 6,034,000,000
Long-term borrowings in foreign currency	US-EXIM (*1)	3.02%	2022-12-18	USD	110,579,852	129,599,586,520
	US-EXIM (*1)	2.12%	2022-12-18	USD	256,580,648	300,712,519,139
	HSBC	Libor (3M) +0.60%	2017-09-04	USD	77,000,000	90,244,000,000
	Baha funding loan	Libor (3M) +3.5%	2020-09-07	USD	39,765,859	46,605,586,912
	Equity loan	10.00%	2020-09-07	USD	38,314,168	44,904,205,343
	Equity loan	4.00%	2018-12-31	USD	76,200,363	89,306,825,577
				USD	598,440,891	707,406,723,491
Less: current portion						(61,473,157,952)
						₩ 645,933,565,539

(*1) Repayments are made on every June and December until the date of maturity.

22. Borrowings and bonds payable (cont'd)

Details of bonds payable as at December 31, 2016 and 2015 are as follows (Foreign currency in unit and Korean won):

			2016		
	Annual interest rate	Maturity date	Foreign currency		Equivalent Korean won
4th Korea Resources Corporation Bonds	4.43%	2021-05-26		-	₩ 200,000,000,000
7th-1 Korea Resources Corporation Bonds	3.54%	2018-11-13		-	100,000,000,000
7th-2 Korea Resources Corporation Bonds	3.80%	2023-11-13		-	100,000,000,000
Global Bonds	2.13%	2018-05-02	USD	500,000,000	604,250,000,000
9th-1 Korea Resources Corporation Bonds	3.34%	2019-04-15		-	110,000,000,000
9th-2 Korea Resources Corporation Bonds	3.67%	2024-04-15		-	100,000,000,000
Global Bonds	2.25%	2020-04-29	USD	350,000,000	422,975,000,000
11th-1 Korea Resources Corporation Bonds	2.31%	2020-07-10		-	140,000,000,000
11th-2 Korea Resources Corporation Bonds	2.81%	2030-07-10		-	110,000,000,000
13th-1 Korea Resources Corporation Bonds	1.70%	2021-02-18		-	260,000,000,000
13th-2 Korea Resources Corporation Bonds	1.90%	2026-02-18		-	80,000,000,000
13th-3 Korea Resources Corporation Bonds	2.04%	2036-02-18		-	100,000,000,000
Global Bonds	2.25%	2021-04-19	USD	500,000,000	604,250,000,000
14th Korea Resources Corporation Bonds	1.64%	2021-05-13		-	100,000,000,000
Global Bonds (*1)	2.88%	2019-05-07	USD	340,000,000	410,890,000,000
Global Bonds CHF (*1)	0.75%	2019-11-12	CHF	100,000,000	118,133,000,000
Global Bonds AUD (*1)	4.13%	2019-12-03	AUD	100,000,000	87,205,000,000
Global Bonds (*1)	2.88%	2019-05-07	USD	120,000,000	145,020,000,000
			USD	1,810,000,000	
			CHF	100,000,000	
			AUD	100,000,000	3,792,723,000,000
Less bond discount					(15,489,577,954)
Less current portion					-
Less current portion of bond discount					-
					₩ 3,777,233,422,046

(*1) The Company provided payment guarantees for the loans payable of MMB (See Note 45).

22. Borrowings and bonds payable (cont'd)

	Annual interest rate	Maturity date	2015 Foreign currency		2015 Equivalent Korean won
4th Korea Resources Corporation Bonds	4.43%	2021-05-26		-	₩ 200,000,000,000
7th-1 Korea Resources Corporation Bonds	3.54%	2018-11-13		-	100,000,000,000
7th-2 Korea Resources Corporation Bonds	3.80%	2023-11-13		-	100,000,000,000
8th Korea Resources Corporation Bonds	-	-	USD	260,000,000	304,720,000,000
Global Bonds	2.13%	2018-05-02	USD	500,000,000	586,000,000,000
9th-1 Korea Resources Corporation Bonds	3.34%	2019-04-15		-	110,000,000,000
9th-2 Korea Resources Corporation Bonds	3.67%	2024-04-15		-	100,000,000,000
Global Bonds	2.25%	2020-04-29	USD	350,000,000	410,200,000,000
11th-1 Korea Resources Corporation Bonds	2.31%	2020-07-10		-	140,000,000,000
11th-2 Korea Resources Corporation Bonds	2.81%	2030-07-10		-	110,000,000,000
12th Korea Resources Corporation Bonds	-	-	USD	200,000,000	234,000,000,000
Global Bonds (*1)	2.88%	2019-05-07	USD	340,000,000	398,480,000,000
Global Bonds CHF (*1)	0.75%	2019-11-12	CHF	100,000,000	118,539,000,000
Global Bonds AUD (*1)	4.13%	2019-12-03	AUD	100,000,000	85,310,000,000
Global Bonds (*1)	2.88%	2019-05-07	USD	120,000,000	140,640,000,000
			USD	1,770,000,000	
			CHF	100,000,000	
			AUD	100,000,000	3,138,289,000,000
Less bond discount					(14,091,212,180)
Less current portion					(539,120,000,000)
Less current portion of bond discount					38,038,760
					₩ 2,585,115,826,580

(*1) The Company provided payment guarantees for the loans payable of MMB (See Note 45).

23. Borrowings and loans from Special Account for Energy and Resources

The Company provides loan services, delegated by the Ministry of Trade, Industry and Energy (MTIE), to certain companies engaged in development of energy and resource businesses in accordance with the *Act on Special Account for the Energy and Resources.*

The Company offsets loans and borrowings from the Special Account for Energy and Resources in accordance with the Pronouncement 2012-334 '*Special Account for Energy and Resources Operation Method'*, Article 14, which indicates that the Company is not obligated to make decisions regarding loans and borrowings issued.

Loans are given to the companies that are engaged in the energy and resources sector for the promotion of the Government's energy supply, energy price stability and natural resources policies.

Business	Repayment conditions
Overseas mineral resources development	General
Overseas resources survey (exploration)	Successful effort method

With recommendations from the audit agency (Overseas Resource Development Association) and approval by the MTIE, the Company received loans from the Special Account for Energy and Resources and provided the loans to it's clients.

The Company is in compliance with the rules of the MTIE in relation to loan terms, interest rates, repayment terms and handling fees.

23. Borrowings and loans from Special Account for Energy and Resources (cont'd)

Details of borrowings received from the special Account for Energy and Resources as at December 31, 2016 and 2015 are as follows (Korean won):

	2016					
	January 1	Borrowings	Repayment	Exemption	Others	December 31
Overseas mineral resources development	₩ 313,069,601,240	₩ -	₩ (66,897,682,220)	₩ -	₩ 2,553,491,225	₩ 248,725,410,245
Overseas resources survey (exploration)	71,724,430,888	-	(5,004,153,390)	-	504,503,000	67,224,780,498
	₩ 384,794,032,128	₩ -	₩ (71,901,835,610)	₩ -	₩ 3,057,994,225	₩ 315,950,190,743

	2015					
	January 1	Borrowings	Repayment	Exemption	Others	December 31
Overseas mineral resources development	₩ 347,889,327,570	₩ -	₩ (41,470,780,500)	₩ -	₩ 6,651,054,170	₩ 313,069,601,240
Overseas resources survey (exploration)	72,708,552,500	2,483,040,000	-	(4,308,799,212)	841,637,600	71,724,430,888
	₩ 420,597,880,070	₩ 2,483,040,000	₩ (41,470,780,500)	₩ (4,308,799,212)	₩ 7,492,691,770	₩ 384,794,032,128

Details of loans from the Special Account for Energy and Resource as at December 31, 2016 and 2015 are as follows (Korean won):

	2016						
	Borrower	January 1	Loans provided	Repayment	Exemption	Other increase	December 31
Overseas mineral resources development	Posco Daewoo Corporation, etc.	₩ 313,201,936,356	₩ -	₩ (67,172,214,766)	₩ -	₩ 2,553,529,750	₩ 248,583,251,340
Overseas resources survey (exploration)	SK Networks Co., Ltd. and others	56,098,308,785	-	(4,977,989,395)	-	473,770,000	51,594,089,390
		₩ 369,300,245,141	₩ -	₩ (72,150,204,161)	₩ -	₩ 3,027,299,750	₩ 300,177,340,730

(*1) Amounts above exclude inter-group loans.

	2015						
	Borrower	January 1	Loans provided	Repayment	Exemption	Other increase	December 31
Overseas mineral resources development	Posco Daewoo Corporation, etc.	₩ 347,875,376,620	₩ -	₩ (41,334,723,214)	₩ -	₩ 6,661,282,950	₩ 313,201,936,356
Overseas resources survey (exploration)	SK Networks Co., Ltd. and others	55,378,234,900	2,483,040,000	-	(2,533,190,115)	770,224,000	56,098,308,785
		₩ 403,253,611,520	₩ 2,483,040,000	₩ (41,334,723,214)	₩ (2,533,190,115)	₩ 7,431,506,950	₩ 369,300,245,141

(*1) Amounts above exclude inter-group loans.

24. Other financial liabilities

Details of other financial liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Nickel Funds	₩ 63,448,895,092	₩ 67,558,289,537

The Group's investment in the Ambatory nickel mine which is classified as an investment in associates was partly financed with the Nickel Fund. The bondholders are to be paid dividends by the Company based on mining outputs and sales thereof over a seven year period upon the commencement of operations of the mine. Consequently, the Group recognized ₩63,448,895,092 (2015: ₩67,558,289,537) as consideration for the securitization of debt based on sales of nickel, prices and exchange rates.

25. Pensions benefits

Defined contribution plans

The Group operates defined contribution plans at the election of employees. A defined contribution is managed separately by the plan's administrator. When employees terminate their employment before benefits have vested, the Group's obligation to make contributions to the plan decreases on a pro rata basis. Contributions paid by the Group amounted to ₩1,652,853,175 (2015: ₩1,670,418,458) for the year ended December 31, 2016.

Costs related to the defined contribution plans were recognized as follows (Korean won):

	2016	2015
Cost of sales	₩ 1,213,457,155	₩ 1,207,987,547
Selling and administrative expenses	439,396,020	462,430,911
	₩ 1,652,853,175	₩ 1,670,418,458

Defined benefit plans

The Group operates a defined benefit plan and the cost of the defined benefit plan is determined by Mirae Asset Securities Co., Ltd., an independent actuary, on January 25, 2017. The present value of the defined benefit obligations, current service costs and past service costs are calculated using the projected unit credit method.

The major components of the defined benefit liability as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
The present value of defined benefit liability under the defined benefit pension plan	₩ 11,718,807,738	₩ 9,586,304,034
Fair value of plan assets	(10,363,947,857)	(6,697,146,835)
	₩ 1,354,859,881	₩ 2,889,157,199
The present value of defined benefit liability not related to the defined benefit pension plan	70,834,390	56,961,390
	₩ 1,425,694,271	₩ 2,946,118,589

Changes in the defined benefit obligation for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ 9,643,265,424	₩ 7,551,336,694
Current service costs	2,010,726,301	1,762,535,605
Interest costs (*1)	277,897,412	253,001,366
Re-measurement gain on obligation	649,211,363	476,818,155
Benefits paid	(791,458,372)	(400,426,396)
As at December 31	₩ 11,789,642,128	₩ 9,643,265,424

(*1) Interest cost on defined benefit pension plan is based on the bond yield of corporate bonds issued by a blue chip company that are denominated in the same monetary unit and have a similar maturity on the date of appraisal. The Group has referred to the rate of return for corporate bonds (AA+). The actual rate of discount applied was 2.96% in consideration of the matching of maturity of 14.42 years.

25. Pensions benefits (cont'd)

Changes in the fair value of plan assets for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ 6,697,146,835	₩ 6,488,394,768
Expected return on plan assets (*1)	173,176,863	200,082,903
Re-measurement loss on plan assets	(65,261,761)	(77,826,167)
Contributions by employer	(641,114,080)	(217,257,239)
Benefits paid	4,200,000,000	303,752,570
As at December 31	₩ 10,363,947,857	₩ 6,697,146,835

(*1) Interest income of plan assets is based on the bond yield of corporate bonds issued by a blue chip company that are denominated in the same monetary unit and have a similar maturity on the date of appraisal. The Group referred to the rate of return for corporate bonds (AA+). The actual rate of discount applied was 2.96% in consideration of the matching of maturity of 14.42 years.

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Accumulated re-measurement gains and losses on defined benefit plans recognized as other comprehensive income (before consideration of tax effect) amounted to ₩(-)3,389,702,922 (2015: ₩(-)2,675,229,798) for the year ended December 31, 2016.

Details of the defined benefit plan recognized in statement of comprehensive income for the years ended December 31, 2016 and 2015 is as follows (Korean won):

	2016	2015
Current service costs	₩ 2,010,726,301	₩ 1,762,535,605
Interest costs	277,897,412	253,001,366
Expected return on plan assets	(173,176,863)	(200,082,903)
	₩ 2,115,446,850	₩ 1,815,454,068

Costs related to the defined benefit plan were recognized as follows (Korean won):

	2016	2015
Cost of sales	₩ 1,587,715,670	₩ 1,361,590,551
Selling and administrative expenses	527,731,180	453,863,517
	₩ 2,115,446,850	₩ 1,815,454,068

Re-measurement losses which are recognized as other comprehensive income are as follows (Korean won):

	2016	2015
Actuarial loss on defined benefit obligation	₩ (649,211,363)	₩ (476,818,155)
Difference between expect return on plan assets and actual interest income	(65,261,761)	(77,826,167)
	₩ (714,473,124)	₩ (554,644,322)

Actuarial valuation losses recognized in 2016 are included in deficit in the consolidated financial statements.

The Group accepted early retirement applications from its employees and provided the early retirement benefits of ₩1,634,161,329 for the year ended December 31, 2016.

26. Provisions

Details of provision as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Provisions (*1) for employee benefits	₩ 4,742,908,000	₩ -	₩ 4,201,002,000	₩ -
Provisions for restoration (*2)	629,220,027	43,657,753,653	139,553,556	42,384,509,099
Provisions for litigation (*3)	-	-	-	31,154,375,904
Financial guarantee liability (*4)	-	41,449,133,000	-	97,467,036,000
	₩ 5,372,128,027	₩ 85,106,886,653	₩ 4,340,555,556	₩ 171,005,921,003

(*1) The Group estimates performance-related bonuses based on business performance and assessment Standards. This estimation could be changed.
(*2) The Group estimates recovery expenses expected after completion of mining on basis of the best estimation of management. This estimation could be different by the change of recovery expenses and inflation rate.
(*3) The provision has been replaced with other non-current financial liabilities due to the loss of a lawsuit in the current period (see Note 47).
(*4) The above provision is the present value of a difference between a payment made by the Group and an estimated recoverable amount under the rights of subrogation.

Changes in provisions for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016					
	January 1	Incurred	Utilized	Reversed	Others	December 31
Provision for employee benefits	₩ 4,201,002,000	₩ 5,397,009,510	₩ (4,855,103,510)	₩ -	₩ -	₩ 4,742,908,000
Provision for restoration	42,524,062,655	421,150,092	-	-	1,341,760,933	44,286,973,680
Provision for litigation	31,154,375,904	-	-	-	(31,154,375,904)	-
Financial guarantee liability	97,467,036,000	51,058,140,534	-	-	(107,076,043,534)	41,449,133,000
	₩ 175,346,476,559	₩ 56,876,300,136	₩ (4,855,103,510)	₩ -	₩ (136,888,658,505)	₩ 90,479,014,680

	2015					
	January 1	Incurred	Utilized	Reversed	Others	December 31
Provision for employee benefits	₩ 6,099,549,000	₩ 4,201,002,000	₩ (3,918,181,480)	₩ (2,181,367,520)	₩ -	₩ 4,201,002,000
Provision for restoration	41,112,279,334	-	-	(1,265,764,982)	2,677,548,303	42,524,062,655
Provision for litigation	30,926,599,858	227,776,046	-	-	-	31,154,375,904
Financial guarantee liability	-	97,467,036,000	-	-	-	97,467,036,000
	₩ 78,138,428,192	₩ 101,895,814,046	₩ (3,918,181,480)	₩ (3,447,132,502)	₩ 2,677,548,303	₩ 175,346,476,559

27. Government grants

Accounting policies for Government grants are presented in the way of deducting from related assets in the event that the Group acquires assets with grants, according to Government Accounting Standards.

Details of government grants as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Cash and cash equivalents	₩ -	₩ 2,569,145,342
Loans	2,057,239,365	2,057,239,365
Land	538,934,740	538,934,740
Buildings	5,509,545,112	358,496,309
Structures	312	416
Machinery	1,900,427,125	676,186,808
Vehicles	6,117,720	9,030,070
Others	2,793,285,106	24,471,092
Construction in progress	-	2,904,640,748
Exploration and evaluation assets	15,481,260,655	15,481,260,655
Available for sale financial assets	1,373,294,544	1,373,294,544
Investments in associates	47,429,339,087	51,208,356,940
Investments in joint ventures	34,889,005,146	34,889,005,146
	₩ 111,978,448,912	₩ 112,090,062,175

27. Government grants (cont'd)

Changes in government grants for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousand):

	2016						
	January 1	Receipts	Acquisition	Amortization	Reflected on prifits	Others	December 31
Cash and cash equivalent	₩ 2,569,145,342	₩ 23,985,000,000	₩ (6,520,408,621)	₩ -	₩ (20,033,736,721)	₩ -	₩ -
Loans	2,057,239,365	-		-	-	-	2,057,239,365
Land	538,934,740	-	-	-	-	-	538,934,740
Buildings	358,496,309	-	2,287,096,386	(40,688,331)	-	2,904,640,748	5,509,545,112
Structures	416	-	-	(104)	-	-	312
Machinery	676,186,808	-	1,384,853,376	(160,613,059)	-	-	1,900,427,125
Vehicles	9,030,070	-	-	(2,912,350)	-	-	6,117,720
Others	24,471,092	-	2,848,458,859	(79,644,845)	-	-	2,793,285,106
Construction in progress	2,904,640,748	-	-	-	-	(2,904,640,748)	-
Exploration and evaluation assets	15,481,260,655	-	-	-	-	-	15,481,260,655
Available for sale financial assets	1,373,294,544	-	-	-	-	-	1,373,294,544
Investments in associates	51,208,356,940	-	-	(3,779,017,853)	-	-	47,429,339,087
Investments in joint ventures	34,889,005,146	-	-	-	-	-	34,889,005,146
	₩ 112,090,062,175	₩ 23,985,000,000	₩ -	₩ (4,062,876,542)	₩ (20,033,736,721)	₩ -	₩ 111,978,448,912

	2015						
	January 1	Receipts	Acquisition	Amortization	Disposals	Reflected on profits	December 31
Cash and cash equivalent	₩ 2,486,291,590	₩ 26,864,000,000	₩ (3,119,380,550)	₩ -	₩ -	₩ (23,661,765,698)	₩ 2,569,145,342
Loans	2,057,239,365	-	-	-	-	-	2,057,239,365
Land	538,934,740	-	-	-	-	-	538,934,740
Buildings	380,347,689	-	-	(21,851,380)	-	-	358,496,309
Structures	520	-	-	(104)	-	-	416
Machinery	812,400,627	-	8,340,000	(144,371,048)	(182,771)	-	676,186,808
Vehicles	37,814,883	-	1,000,000	(29,784,813)	-	-	9,030,070
Others	29,455,015	-	420,000	(5,277,079)	(126,844)	-	24,471,092
Construction in progress	-	-	2,904,640,748	-	-	-	2,904,640,748
Exploration and evaluation assets	15,276,280,853	-	204,979,802	-	-	-	15,481,260,655
Available for sale financial assets	8,622,077,544	-	-	(7,248,783,000)	-	-	1,373,294,544
Investments in associates	86,605,880,915	-	-	(35,397,523,975)	-	-	51,208,356,940
Investments in joint ventures	34,889,005,146	-	-	-	-	-	34,889,005,146
	₩ 151,735,728,887	₩ 26,864,000,000	₩ -	₩ (42,847,591,399)	₩ (309,615)	₩ (23,661,765,698)	₩ 112,090,062,175

Government grants reflected on profits for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Net income recognized	₩ 20,033,736,721	₩ 23,661,765,698

28. Other liabilities

Details of other liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Current	Non-current	Current	Non-current
Advances	₩ 3,346,713,007	₩ -	₩ 1,417,903,406	₩ -
Unearned income	34,941,310	-	1,170,064,238	-
Withholding	3,293,739,089	-	1,308,644,260	-
Others	62,500	52,263,489,837	10,032,050	51,002,390,460
	₩ 6,675,455,906	₩ 52,263,489,837	₩ 3,906,643,954	₩ 51,002,390,460

29. Issued capital

Details of issued capital as at December 31, 2016 and 2015 are as follows (Korean won):

	2016			2015		
	Government	Non-government	Total	Government	Non-government	Total
Issued capital	₩ 1,955,570,200,000	₩ 2,700,000,000	₩ 1,958,270,200,000	₩ 1,887,670,200,000	₩ 2,700,000,000	₩ 1,890,370,200,000

29. Issued capital (cont'd)

Changes in issued capital for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ 1,890,370,200,000	₩ 1,710,170,200,000
Issuance of share capital	67,900,000,000	180,200,000,000
As at December 31	₩ 1,958,270,200,000	₩ 1,890,370,200,000

Changes in discount on stock issuance for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ (2,048,521,362)	₩ (2,000,521,362)
Issuance of share capital	-	(48,000,000)
As at December 31	₩ (2,048,521,362)	₩ (2,048,521,362)

30. Retained earnings and dividends

Details of deficits as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Legal reserve (*1)	₩ -	₩ 26,058,044,906
Undisposed deficits	(2,717,187,461,058)	(1,936,012,981,011)
	₩ (2,717,187,461,058)	₩ (1,909,954,936,105)

(*1) In accordance with the Korea Resources Corporation Act, an amount equal to at least 20% of the profits after offsetting the losses carried forward is required to be appropriated as a legal reserve until the reserve equals 50% of capital stock, if the entity generates profit for the corresponding year.

Changes in deficit for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ (1,909,954,936,105)	₩ (116,963,290,772)
Profit (loss) for the year attributed to parent shareholder's equity	(806,518,051,829)	(1,792,559,022,762)
Re-measurement of the net defined benefit liability	(714,473,124)	(432,622,571)
As at December 31	₩ (2,717,187,461,058)	₩ (1,909,954,936,105)

Changes in re-measurement of the net defined benefit liability for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
As at January 1	₩ (2,190,959,623)	₩ (1,758,337,052)
Changes for the year	(714,473,124)	(554,644,322)
Tax effect	-	122,021,751
As at December 31	₩ (2,905,432,747)	₩ (2,190,959,623)

31. Statements of disposition of deficit

Statement of disposition of deficit for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Ⅰ. Undisposed deficit	₩ 2,699,000,177,003	₩ 1,698,325,755,223
1.Unappropriated retained earnings carried forward from the prior year	1,672,267,710,317	-
2.Loss for the year	1,026,017,993,562	1,697,893,132,652
3.Re-measurement gain or loss	714,473,124	432,622,571
Ⅱ. Disposition	-	26,058,044,906
1.Legal reserve	-	26,058,044,906
Ⅲ. Undisposed deficit to be carried forward to the next year	₩ 2,699,000,177,003	₩ 1,672,267,710,317

32. Other components of equity

Details of other components of equity as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Gain on valuation of available-for-sale financial assets	₩ 2,143,799,204	₩ 2,089,252,752
Changes in equity adjustment in equity method	138,039,007,776	117,819,433,944
Changes in equity	38,215,111,738	38,215,111,738
Exchange difference on translation of foreign operations	(14,149,398,382)	(7,610,178,887)
Effective portion of changes in fair value of cash flow hedge	-	351,264,045
Adjustment of government subsidy	59,852,173	(2,905,270)
	₩ 164,308,372,509	₩ 150,861,978,322

Changes in other components of equity for the years ended December 31, 2016 and 2015 are as follows (Korean won):

2016	Gain (loss) on valuation of available-for-sale financial assets	Changes in equity adjustment in equity method	Changes in equity	Exchange difference on translation of foreign operation	Effective portion of changes in fair value of cash flow hedge	Adjustment of government subsidy	Total
As at January 1	₩ 2,089,252,752	₩ 117,819,433,944	₩ 38,215,111,738	₩ (7,610,178,887)	₩ 351,264,045	₩ (2,905,270)	₩ 150,861,978,322
Increase	54,546,452	20,219,573,832	-	-	-	62,757,443	20,336,877,727
Decrease	-	-	-	6,539,219,495	351,264,045	-	6,890,483,540
As at December 31	₩ 2,143,799,204	₩ 138,039,007,776	₩ 38,215,111,738	₩ (14,149,398,382)	₩ -	₩ 59,852,173	₩ 164,308,372,509

2015	Gain (loss) on valuation of available-for-sale financial assets	Changes in equity adjustment in equity method	Changes in equity	Exchange difference on translation of foreign operation	Effective portion of changes in fair value of cash flow hedge	Adjustment of government subsidy	Total
As at January 1	₩ (12,805,743,612)	₩ 45,881,039,246	₩ 38,215,111,738	₩ (39,254,368,643)	₩ 699,026,376	₩ (128,076,280)	₩ 32,606,988,825
Increase	(73,180,247)	71,938,394,698	-	31,644,189,756	879,537,727	125,171,010	104,514,112,944
Decrease	(14,968,176,611)	-	-	-	1,227,300,058	-	(13,740,876,553)
As at December 31	₩ 2,089,252,752	₩ 117,819,433,944	₩ 38,215,111,738	₩ (7,610,178,887)	₩ 351,264,045	₩ (2,905,270)	₩ 150,861,978,322

33. Revenue

Details of revenue for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Domestic	Overseas	Domestic	Overseas
Mineral revenue	₩ 21,231,231,917	₩ 46,063,158,063	₩ 14,845,167,979	₩ 38,389,256,107
Interest income	88,319,287,388	-	96,219,052,927	-
Government grant revenue	20,033,736,721	-	23,661,765,698	-
Others:	152,592,237,059	2,241,350,600	109,032,007,074	15,777,903,570
Financial currency trading profit	114,572,017,418	2,021,489,061	93,669,915,275	12,528,319,537
Reversal of provision for financial assets	1,467,988,808	-	6,921,361,819	-
Gain on disposition of investment in associates	1,094,327,262	-	-	2,993,724,631
Share of gain in associates and joint ventures	657,187,796	-	346,832,409	-
Commission income	6,064,367,125	219,861,539	7,766,493,883	255,859,402
Gain on derivative assets	28,736,348,650	-	327,403,688	-
	₩ 282,176,493,085	₩ 48,304,508,663	₩ 243,757,993,678	₩ 54,167,159,677

Cash flow hedge accounting was applied to a part of other income in foreign currency. To hedge the foreign currency income against the fluctuation risk of an exchange rate, the Group designated foreign currency derivatives as hedging instruments. Other income in 2016 and 2015 did not include the amount that the effective hedging portion of an income from hedging was reclassified.

34. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Payroll	₩ 12,980,779,155	₩ 9,447,578,781
Pension benefits	1,393,321,212	916,294,428
Employee welfare benefits	1,632,246,105	1,446,548,369
Insurance	3,847,917,095	18,445,417
Depreciation	2,622,535,736	1,386,978,060
Amortization of intangible assets	1,883,880,476	2,686,471,201
Fees and commission	5,780,882,914	11,137,930,559
Advertising	235,237,296	376,668,651
Training	116,670,464	126,986,092
Car maintenance	155,205,169	164,869,659
Book & printing	156,117,518	228,333,103
Business expenses	103,321,029	177,051,437
Rents	256,286,331	323,312,595
Communication	33,263,071	49,894,576
Taxes and dues	3,866,805,657	1,402,516,606
Supplies	68,721,066	58,215,736
Utilities	266,556,944	165,736,787
Repairs and maintenance	46,258,801	114,939,586
Research and development	226,568,737	560,398,450
Travel and transportation	769,529,785	596,653,696
Uniforms	37,669,749	42,081,945
Research analysis	19,835,389	36,171,569
Association fees	35,034,542	10,013,801
Others	274,565,567	3,206,119,370
	₩ 36,809,209,808	₩ 34,680,210,474

35. Other income

Details of other income for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Reversal of allowance of doubtful accounts	₩	30,746,192	₩	101,504,954
Gain on exemption of liabilities		-		1,775,609,097
Compensations		-		16,140,794
Others		1,281,341,543		1,386,663,319
	₩	1,312,087,735	₩	3,279,918,164

36. Other expenses

Details of other expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Other bad debt expenses	₩	49,912,815,718	₩	568,538,112
Donation		725,845,205		1,191,393,153
Other provisions		51,058,140,534		97,467,036,000
	₩	101,696,801,457	₩	99,226,967,265

37. Other gain and loss

Details of other gains and losses for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Gain on disposal of tangible assets	₩	41,688,318	₩	41,759,329,538
Loss on disposal of tangible assets		(63,416,177)		(727,869,016)
Loss on disposal of intangible assets		-		(129,064,939)
Loss on disposal of other non- current assets		(8,210,229)		-
Loss on impairment of tangible assets		(561,211,765,951)		(941,535,246,976)
Loss on impairment intangible assets		(1,157,759,448)		(32,764,234,125)
Other losses		(179,930,417)		(1,018,780,377)
	₩	(562,579,393,904)	₩	(934,415,865,895)

38. Finance income

Details of finance income for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Interest income	₩	4,510,515,907	₩	3,255,877,779
Gain on foreign currency translation		6,551,709,491		29,749,724
Gain on foreign currency transactions		8,670,618,534		9,667,163,435
	₩	19,732,843,932	₩	12,952,790,938

38. Finance income (cont'd)

Details of Interest income for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Cash and cash equivalents	₩	691,293,337	₩	415,372,635
Current financial instruments		3,188,668,367		1,613,931,542
Non-current financial instruments		-		7,121,609
Loans		630,554,203		1,219,451,993
	₩	4,510,515,907	₩	3,255,877,779

39. Finance cost

Details of finance costs for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Interest expenses	₩	-	₩	5,607,063,226
Loss on foreign currency translation		3,122,225,144		4,248,516,907
Loss on foreign currency transactions		4,025,817,612		325,200,278
	₩	7,148,042,756	₩	10,180,780,411

Details of interest expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Short-term borrowings	₩	-	₩	5,605,062,963
Others		-		2,000,263
	₩	-	₩	5,607,063,226

40. Income tax

Details of income tax for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Current income tax expense	₩	1,777,094,331	₩	-
Adjustments to prior year current income tax expense		-		182,946,591
Relating to origination and reversal of temporary difference		21,659,154,097		(128,798,638,946)
Total income tax benefit		23,436,248,428		(128,615,692,355)
Income taxes recognized directly in equity		-		122,021,751
Deferred tax directly charged to equity		-		4,201,152,821
Tax effects on subsidiaries		12,501,231		3,000,301,978
Income tax benefit	₩	23,448,749,659	₩	(121,292,215,805)

40. Income tax (cont'd)

Reconciliation of effective tax rate for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Loss before income taxes	₩	(963,968,359,606)	₩	(2,184,866,230,601)
Taxes at the statutory income tax rate of 22%		(289,190,507,882)		(480,670,570,732)
Non-temporary differences		441,135,549		403,653,294
Adjustments in respect of current income tax of prior years		2,555,738,583		(681,307)
Recognition of previously unrecognized tax loss, tax credit and temporary difference prior to previous period		317,336,891,467		372,040,139,762
Effect of a current taxable loss recognized		-		-
Others		(7,694,508,058)		(13,064,756,822)
Income tax benefit	₩	23,448,749,659	₩	(121,292,215,805)
Effective income tax rate (*1)		-		-

(*1) Effective income tax rate for the years ended December 31, 2016 and 2015 were not calculated due to recurring net losses.

Income tax recognized directly in comprehensive income for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Re-measurement loss on defined benefit plans	₩	-	₩	(122,021,751)

Deferred income tax recognized directly in comprehensive income for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016		2015
Gain (loss) on cash flow hedges	₩	-	₩	-
Loss on valuation of available-for-sale financial asset		-		(4,201,152,821)
	₩	-	₩	(4,201,152,821)

Changes in deferred tax assets and liabilities for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016				
		January 1		Increase (decrease)		December 31
Deferred taxes on temporary differences:						
Government grants	₩	43,464,441,298	₩	(6,235,064,270)	₩	37,229,377,028
Gain or loss on foreign currency translation		613,718,210		(2,778,940,576)		(2,165,222,366)
Advanced depreciation provision		(41,572,615,065)		7,096,876,909		(34,475,738,156)
Prepaid expenses		(2,828,727,750)		1,444,463,344		(1,384,264,406)
Equity method investments		354,371,851,926		103,410,381,587		457,782,233,513
Changes in equity adjustment in equity method		(18,377,676,955)		-		(18,377,676,955)
Pension benefits		2,015,195,658		505,525,435		2,520,721,093
Allowance for doubtful accounts		3,407,045,206		132,502,124,724		135,909,169,930
Other non-current provisions		28,345,903,247		(19,227,093,987)		9,118,809,260
Tangible assets		43,761,826,134		48,569,921,982		92,331,748,116
Others		85,393,444,344		(41,956,697,968)		43,436,746,376
		498,594,406,253		223,331,497,179		721,925,903,432
Tax credit		2,402,522,785		1,570,182,064		3,972,704,849
Donation deduction		1,062,154,527		(1,062,154,527)		-
Unused tax losses		39,323,140,383		74,740,533,115		114,063,673,498
		541,382,223,948		298,580,057,832		839,962,281,780
Net deferred tax assets not recognized		419,304,846,902		317,336,891,467		736,641,738,369
	₩	122,077,377,046	₩	(18,756,833,635)	₩	103,320,543,411

40. Income tax (cont'd)

	2015		
	January 1	Increase (decrease)	December 31
Deferred taxes on temporary differences:			
Government grants	₩ 42,859,284,069	₩ 605,157,229	₩ 43,464,441,298
Gain or loss on foreign currency translation, net	5,828,231,682	(5,214,513,472)	613,718,210
Advanced depreciation provision	(41,572,615,065)	-	(41,572,615,065)
Prepaid expenses	(3,552,510,615)	723,782,865	(2,828,727,750)
Equity method investments	(6,517,937,303)	360,889,789,229	354,371,851,926
Changes in equity adjustment in equity method	(18,377,676,955)	-	(18,377,676,955)
Pension benefits	1,504,971,908	510,223,750	2,015,195,658
Allowance for doubtful accounts	3,541,426,777	(134,381,571)	3,407,045,206
Other non-current provisions	6,803,851,969	21,542,051,278	28,345,903,247
Tangible assets	(123,176,543,243)	166,938,369,377	43,761,826,134
Others	163,832,995,897	(78,439,551,553)	85,393,444,344
	31,173,479,121	467,420,927,132	498,594,406,253
Tax credit	-	2,402,522,785	2,402,522,785
Donation deduction	1,062,154,527	-	1,062,154,527
Unused tax losses	8,307,811,592	31,015,328,791	39,323,140,383
	40,543,445,240	500,838,778,708	541,382,223,948
Net deferred tax assets not recognized	47,264,707,140	372,040,139,762	419,304,846,902
	₩ (6,721,261,900)	₩ 128,798,638,946	₩ 122,077,377,046

Details of deferred tax assets and liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Deferred assets	₩ 103,320,543,411	₩ 122,077,377,046
Deferred liabilities	-	-

41. Classification based on nature of expenses

Details of expenses based on nature of expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016		
	Selling and administrative expenses	Cost of sales	Total
Purchase of goods	₩ -	₩ 55,165,497,969	₩ 55,165,497,969
Interest	-	69,027,844,419	69,027,844,419
Government subsidy agency fees	-	20,033,736,721	20,033,736,721
Loss on transactions of financial exchange	-	132,000,275,174	132,000,275,174
Impairment loss on financial assets	-	2,972,358,095	2,972,358,095
Share of loss in associates and joint ventures	-	261,050,399,877	261,050,399,877
Loss on disposal of investments in associates	-	2,387,147,684	2,387,147,684
Impairment of investments in joint ventures	-	757,746,363	757,746,363
Impairment of investments in subsidiaries	-	2,948,993,698	2,948,993,698
Loss on derivatives	-	4,423,739,566	4,423,739,566
Changes in stock	-	(16,367,095,515)	(16,367,095,515)
Payroll	12,980,779,155	26,670,366,398	39,651,145,553
Pension benefits	1,393,321,212	4,009,140,142	5,402,461,354
Employee welfare benefits	1,632,246,105	4,427,376,891	6,059,622,996
Insurance	3,847,917,095	58,434,152	3,906,351,247
Depreciation	2,622,535,736	20,985,127,865	23,607,663,601
Amortization of intangible assets	1,883,880,476	990,849,960	2,874,730,436
Fees and commission	5,780,882,914	2,647,977,295	8,428,860,209
Advertising	235,237,296	12,809,040	248,046,336
Training	116,670,464	318,461,411	435,131,875
Car maintenance	155,205,169	472,717,704	627,922,873
Printing	156,117,518	70,480,369	226,597,887
Business expenses	103,321,029	37,570,726	140,891,755
Rents	256,286,331	534,145,087	790,431,418
Communication	33,263,071	85,545,476	118,808,547
Transportation	-	30,099,067	30,099,067
Taxes and dues	3,866,805,657	461,574,894	4,328,380,551
Supplies	68,721,066	275,135,396	343,856,462
Utilities	266,556,944	677,577,862	944,134,806
Repairs and maintenance	46,258,801	181,449,229	227,708,030
Research and development	226,568,737	898,952,878	1,125,521,615
Travel and transportation	769,529,785	1,572,540,573	2,342,070,358
Uniforms	37,669,749	110,312,751	147,982,500
Research analysis	19,835,389	144,004,061	163,839,450
Association fees	35,034,542	94,735,376	129,769,918
Others	274,565,567	7,092,816,442	7,367,382,009
	₩ 36,809,209,808	₩ 607,260,845,096	₩ 644,070,054,904

41. Classification based on nature of expenses (cont'd)

	2015		
	Selling and administrative expenses	Cost of sales	Total
Purchase of goods	₩ -	₩ 48,760,732,778	₩ 48,760,732,778
Loss on valuation of inventories	-	22,629,800,000	22,629,800,000
Interest	-	46,430,413,179	46,430,413,179
Government subsidy agency fees	-	23,661,765,698	23,661,765,698
Loss on transactions of financial exchange	-	154,555,405,898	154,555,405,898
Impairment loss on financial assets	-	49,741,853,591	49,741,853,591
Share of loss in associates and joint ventures	-	912,794,665,366	912,794,665,366
Impairment of investments in joint ventures	-	2,771,290,091	2,771,290,091
Impairment of investments in subsidiaries	-	94,884,246,301	94,884,246,301
Loss on derivatives	-	9,321,452,668	9,321,452,668
Changes in stock	-	(23,121,537,691)	(23,121,537,691)
Payroll	9,447,578,781	24,509,934,105	33,957,512,886
Pension benefits	916,294,428	2,569,578,098	3,485,872,526
Employee welfare benefits	1,446,548,369	4,631,268,242	6,077,816,611
Insurance	18,445,417	64,105,980	82,551,397
Depreciation	1,386,978,060	26,657,747,169	28,044,725,229
Amortization of intangible assets	2,686,471,201	799,999,915	3,486,471,116
Fees and commission	11,137,930,559	4,176,393,669	15,314,324,228
Advertising	376,668,651	17,220,390	393,889,041
Training	126,986,092	504,642,283	631,628,375
Car maintenance	164,869,659	578,028,876	742,898,535
Printing	228,333,103	90,945,879	319,278,982
Business expenses	177,051,437	42,999,467	220,050,904
Rents	323,312,595	984,217,484	1,307,530,079
Communication	49,894,576	147,412,183	197,306,759
Transportation	-	18,142,570	18,142,570
Taxes and dues	1,402,516,606	764,866,806	2,167,383,412
Supplies	58,215,736	410,994,795	469,210,531
Utilities	165,736,787	544,100,134	709,836,921
Repairs and maintenance	114,939,586	338,933,365	453,872,951
Research and development	560,398,450	726,897,768	1,287,296,218
Travel and transportation	596,653,696	2,081,770,748	2,678,424,444
Uniforms	42,081,945	110,235,055	152,317,000
Research analysis	36,171,569	296,166,399	332,337,968
Association fee	10,013,801	124,378,570	134,392,371
Others	3,206,119,370	6,899,201,184	10,105,320,554
	₩ 34,680,210,474	₩ 1,420,520,269,013	₩ 1,455,200,479,487

42. Categories of financial instruments

Details of the book value of current financial assets as at December 31, 2016 and 2015 are as follows (Korean won):

	2016			2015		
	January 1	Incurred	Utilized	Reversed	Others	December 31
Cash and cash equivalents	₩ -	₩ 114,148,798,158	₩ 114,148,798,158	₩ -	₩ 145,344,742,701	₩ 145,344,742,701
Current loans	-	100,569,327,867	100,569,327,867	-	114,074,781,348	114,074,781,348
Current financial instruments	-	68,489,119,435	68,489,119,435	-	1,481,206,396	1,481,206,396
Derivatives assets	11,297,815,182	-	11,297,815,182	351,264,046	-	351,264,046
Other financial assets	-	409,375,107	409,375,107	-	455,302,681	455,302,681
Trade and other receivables	-	125,204,852,095	125,204,852,095	-	103,298,251,976	103,298,251,976
	₩ 11,297,815,182	₩ 408,821,472,662	₩ 420,119,287,844	₩ 351,264,046	₩ 364,654,285,102	₩ 365,005,549,148

42. Categories of financial instruments (cont'd)

Details of the book value of non-current financial assets as at December 31, 2016 and 2015 are as follows (Korean won):

	2016					
	Loans and receivables		Available-for-sale financial assets		Total	
Available-for-sale financial assets	₩	-	₩	1,559,909,991	₩	1,559,909,991
Non-current loans		1,362,748,247,422		-		1,362,748,247,422
Trade and other receivables		7,930,724,752		-		7,930,724,752
	₩	1,370,678,972,174	₩	1,559,909,991	₩	1,372,238,882,165

	2015					
	Loans and receivables		Available-for-sale financial assets		Total	
Available-for-sale financial assets	₩	-	₩	1,864,730,215	₩	1,864,730,215
Non-current loans		1,166,930,669,692		-		1,166,930,669,692
Non-current financial instruments		8,184,064		-		8,184,064
Trade and other receivables		9,020,965,344		-		9,020,965,344
	₩	1,175,959,819,100	₩	1,864,730,215	₩	1,177,824,549,315

Detail of book value of current financial liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	Financial liabilities with amortized cost			
	2016		2015	
Trade and other payables	₩	53,710,834,297	₩	72,834,611,107
Short-term borrowings		353,488,200,000		385,015,200,000
Current portion of long-term borrowings		156,442,137,702		61,473,157,952
Current portion of long-term bonds payable		-		539,081,961,240
	₩	563,641,171,999	₩	1,058,404,930,299

Detail of book value of non-current financial liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016					
	Financial liabilities at fair value through profit or loss		Financial liabilities with amortized cost		Total	
Long-term borrowings (*1)	₩	-	₩	631,765,426,601	₩	631,765,426,601
Bonds payable		-		3,777,233,422,046		3,777,233,422,046
Derivative liabilities		19,706,740,005		-		19,706,740,005
Other financial liabilities		-		63,448,895,092		63,448,895,092
	₩	19,706,740,005	₩	4,472,447,743,739	₩	4,492,154,483,744

	2015					
	Financial liabilities at fair value through profit or loss		Financial liabilities with amortized cost		Total	
Long-term borrowings (*1)	₩	-	₩	661,427,352,526	₩	661,427,352,526
Bonds payable		-		2,585,115,826,580		2,585,115,826,580
Derivative liabilities		14,857,193,192		-		14,857,193,192
Other financial liabilities		-		67,558,289,537		67,558,289,537
	₩	14,857,193,192	₩	3,314,101,468,643	₩	3,328,958,661,835

(*1) Long-term borrowings include net borrowings from the Special Account for Energy and Resources, which accounts for the amount of borrowings offset against the loans taken out of the Special Account for Energy and Resources.

42. Categories of financial instruments (cont'd)

Details of gain or loss from financial instruments by categories for the year ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Loans and receivables:		
Interest income	₩ 92,829,803,295	₩ 99,474,930,706
Bad debt expense	(50,982,140,733)	(3,124,775,661)
Available-for-sale financial assets:		
Loss on impairment of available-for-sale financial assets	(404,298,080)	(40,162,749,269)
Current comprehensive income	54,546,452	14,894,996,364
Financial assets at fair value through profit or loss:		
Gain on settlement of derivatives	17,286,600,000	327,403,688
Gain on valuation of derivatives	11,297,815,182	-
Derivative designated as hedging instrument:		
Loss on settlement of derivatives	(59,201,542)	(1,104,248,569)
Current comprehensive income	(351,264,045)	(425,040,421)
Financial assets at fair value through profit or loss:		
Loss on settlement of derivatives	-	-
Loss on valuation of derivatives	(4,212,604,556)	(8,217,204,099)
Financial liabilities with amortized cost:		
Interest expenses	(69,027,844,419)	(52,037,476,405)
	₩ (3,568,588,446)	₩ 9,625,836,334

43. Financial risk management

43.1 Financial risk management objectives and policies

The Group's principal financial liabilities, other than derivatives, comprise loans and borrowings, trade and other payables, and financial guarantee contracts. The main purpose of these financial liabilities is to finance the Group's operations and to provide guarantees to support its operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds various financial instruments and enters into derivative transactions.

The Group is exposed to market risk, credit risk, interest rate risk and liquidity risk. The Group's senior management oversees the management of these risks so that financial risks are identified, measured and managed in accordance with the Group's policies and risk objectives.

The Board of Directors reviews and agrees policies for managing each of these risks, which are summarized below.

43.2 Market risk

Foreign currency risk
Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities (when revenue or expense is denominated in a different currency from the Group's presentation currency) and the Group's net investments in foreign subsidiaries.

When the nature of the hedge relationship is not an economic hedge, it is the Group's policy to negotiate the terms of the hedging derivatives to match the terms of the underlying hedge items to maximize hedge effectiveness.

43.2 Market risk (cont'd)

The book value of monetary assets and liabilities which is not presented in functional currency as at December 31, 2016 and 2015 are as follows (Korean won):

	2016						
	USD	CNY	MXP	CHF	AUD	Others	Total
Financial assets	₩ 1,932,033,513,529	₩ 22,829,869,968	₩ 100,116,345,770	₩ -	₩ -	₩ 62,057,650	₩ 2,055,041,786,917
Financial liabilities	2,169,320,533,523	-	29,495,122,230	120,850,000,000	87,205,000,000	-	2,406,870,655,753
	₩ (237,287,019,994)	₩ 22,829,869,968	₩ 70,621,223,540	₩ (120,850,000,000)	₩ (87,205,000,000)	₩ 62,057,650	₩ (351,828,868,836)

	2015						
	USD	CNY	MXP	CHF	AUD	Others	Total
Financial assets	₩ 1,551,917,671,151	₩ 35,203,590,919	₩ 101,821,064,993	₩ -	₩ -	₩ 209,518,772	₩ 1,689,151,845,835
Financial liabilities	2,144,868,664,793	19,963,245	95,469,842,392	119,661,691,167	85,955,101,424	-	2,445,975,263,021
	₩ (592,950,993,642)	₩ 35,183,627,674	₩ 6,351,222,601	₩ (119,661,691,167)	₩ (85,955,101,424)	₩ 209,518,772	₩ (756,823,417,186)

The following table demonstrates the sensitivity analysis of a reasonably possible change in the Korean won exchange rate, with all other variables held constant, on the Group's profit before tax as at December 31, 2016 and 2015 (Korean won):

	2016		2015	
	10% up	10% down	10% up	10% down
Profit before tax	₩ (35,182,886,884)	₩ 35,182,886,884	₩ (75,682,341,719)	₩ 75,682,341,719

The sensitivity analyses were conducted on monetary assets and liabilities which were presented in foreign currency other than functional currency at the reporting date.

Interest rate risk

Interest rate risk commonly arises from fluctuations in the future market interest-rate, and mainly involves loans and deposits with floating-rates condition. This can create variables in the interest revenue and interest fee initially promised by loans and deposits. The purpose of the Group's interest rate risk management is to minimize the financial cost and the uncertainty of future changes in interest rates.

The Group manages interest rate risk by preemptively utilizing internal reserves to reduce external borrowings, minimizing the high interest-rate debt proportions, improving short-term and long-term borrowing structure, maintaining appropriate percentage between floating-rate and fixed-rate borrowings, regularly monitoring and implementing domestic and overseas interest-rates trend, and establishing risk countermeasures.

Financial assets and liabilities with floating-rates that are exposed to interest rate risks for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Financial assets	₩ 1,006,184,789,678	₩ 1,052,753,048,282
Financial liabilities	(158,577,656,826)	(1,061,295,560,656)
	₩ 847,607,132,852	₩ (8,542,512,374)

The following table demonstrates the sensitivity analysis to a reasonably possible change in interest rates on that portion of borrowings. With all other variables held constant, the effect of changes in interest rates of floating rate borrowings on profit before tax is as follows (Korean won):

	2016		2015	
	+ 100bp	- 100bp	+ 100bp	- 100bp
Profit before tax	₩ 8,476,071,329	₩ (8,476,071,329)	₩ (85,425,124)	₩ 85,425,124

Other price risk

The Group is susceptible to market price risk arising from uncertainties about future values of the financial instrument and cash flows regarding to listed equity securities out of available for sales and measures the risk of fluctuation of prices, periodically. The material investment in portfolio are managed individually and the Group's Board of Directors reviews and approves all the Group's investment decisions.

43.3 Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities, primarily loans, receivables, available-for-sale assets and derivative assets.

Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance.

The Group evaluates the impairment of trade and other receivables at every reporting date.

The Group's financial assets that are exposed to credit risk and the maximum exposure to credit risk at the reporting date is as follows (Korean won):

		2016	2015
Loans and receivables	Cash and cash equivalents	₩ 114,148,798,158	₩ 145,344,742,701
	Short-term financial instruments	68,489,119,435	1,489,390,460
	Trade and other receivables	133,135,576,847	112,319,217,320
	Long and short-term loans	1,463,317,575,289	1,281,005,451,040
	Others	409,375,107	455,302,681
Available-for-sale assets (excluding equity securities)		1,559,909,991	1,864730,215
Derivative assets		11,297,815,182	351,264,046
		₩ 1,792,358,170,009	₩ 1,542,830,099 ,463

Other than the above, the maximum amount of guarantees that the Group has provided to unrelated parties for its performance are disclosed in Note 45.

While the Group establishes an allowance for the trade receivable which is likely to be impaired due to bankruptcy or whose cash flows are estimable as the trade receivable belongs to a specific project, it determines an allowance for a group of financial assets with similar characteristics based on aging analysis and historical percentage of uncollected trade receivable. For available-for-sale financial assets, held-to-maturity financial assets, deposits and derivatives, the Group recognizes an impairment loss on an individual asset.

43.4 Liquidity risk

The Group is exposed to liquidity risk that it may face difficulties in settling financial liabilities in cash or with financial assets.

The Group forecasts the cash flow of operation, investment and financial activities on the basis of routinely established plans and responds to financial liabilities and assets. Moreover the Group secures and sustains required liquidity to manage possible liquidity risks in advance.

The table below summarizes the maturity profile of the Group's financial liabilities based on contractual undiscounted payments (Korean won):

	2016			
	Total	Under 1 year	1 ~ 5 years	Over 5 years
Borrowings	₩ 1,141,695,764,303	₩ 509,930,337,702	₩ 546,570,938,886	₩ 85,194,487,715
Bonds payable	3,777,233,422,046	-	3,287,480,605,619	489,752,816,427
Trade and other payables	53,710,834,297	53,710,834,297	-	-
Non-current other financial liabilities	63,448,895,092	-	63,448,895,092	-
	₩ 5,036,088,915,738	₩ 563,641,171,999	₩ 3,897,500,439,597	₩ 574,947,304,142

	2015			
	Total	Under 1 year	1 ~ 5 years	Over 5 years
Borrowings	₩ 1,107,915,710,478	₩ 446,488,357,952	₩ 578,426,407,586	₩ 83,000,944,940
Bonds payable	3,124,197,787,820	539,081,961,240	2,075,303,581,244	509,812,245,336
Trade and other payables	72,834,611,107	72,834,611,107	-	-
Non-current other financial liabilities	67,558,289,537	-	67,558,289,537	-
	₩ 4,372,506,398,942	₩ 1,058,404,930,299	₩ 2,721,288,278,367	₩ 592,813,190,276

43.5 Capital management

The objective of the Group's capital risk management is to secure its ability to provide earnings to its shareholders and interested parties and sustain optimal capital structure to reduce the cost of capital. In order to sustain optimal capital structure, the Group uses a debt-to-equity ratio similar to other entities in the industry. Debt-to-equity ratio is calculated by dividing total liabilities by total equity.

The Group's debt-to-equity ratio as at December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Aggregate liabilities	₩ 5,206,639,310,437	₩ 4,620,565,221,696
Aggregate equity	(840,864,204,591)	66,916,133,698
Debt-to-equity ratio	-	6,905%

43.6 Fair value and book value

Details of fair value and book value of financial asset and liabilities as at December 31, 2016 and 2015 are as follows (Korean won):

	2016		2015	
	Book value	Fair value	Book value	Fair value
Financial assets measured at fair value:				
Available-for-sale financial assets	₩ 1,559,909,991	₩ 1,559,909,991	₩ 1,864,730,215	₩ 1,864,730,215
Derivative assets	11,297,815,182	11,297,815,182	351,264,046	351,264,046
	₩ 12,857,725,173	₩ 12,857,725,173	₩ 2,215,994,261	₩ 2,215,994,261
Financial assets measured at amortized cost:				
Cash and cash equivalents	₩ 114,148,798,158	₩ 114,148,798,158	₩ 145,344,742,701	₩ 145,344,742,701
Short-term loans	100,569,327,867	100,569,327,867	114,074,781,348	114,074,781,348
Long-term loans	1,362,748,247,422	1,362,748,247,422	1,166,930,669,692	1,166,930,669,692
Short-term financial instruments	68,489,119,435	68,489,119,435	1,481,206,396	1,481,206,396
Long-term financial instruments	-	-	8,184,064	8,184,064
Trade and other receivables	125,204,852,095	125,204,852,095	103,298,251,976	103,298,251,976
Long-term trade and other receivables	7,930,724,752	7,930,724,752	9,020,965,344	9,020,965,344
Other financial assets	409,375,107	409,375,107	455,302,681	455,302,681
	1,779,500,444,836	1,779,500,444,836	1,540,614,104,202	1,540,614,104,202
	₩ 1,792,358,170,009	₩ 1,792,358,170,009	₩ 1,542,830,098,463	₩ 1,542,830,098,463
Financial liabilities measured at fair value:				
Derivative liabilities	₩ 19,706,740,005	₩ 19,706,740,005	₩ 14,857,193,192	₩ 14,857,193,192
Financial liabilities measured at amortized cost:				
Short-term borrowings	₩ 353,488,200,000	₩ 353,488,200,000	₩ 385,015,200,000	₩ 385,015,200,000
Current portion of long-term borrowings	156,442,137,702	156,442,137,702	61,473,157,952	61,473,157,952
Current portion of long-term bonds	-	-	539,081,961,240	539,081,961,240
Long-term borrowings	631,765,426,601	631,765,426,601	661,427,352,526	661,427,352,526
Bonds payable	3,777,233,422,046	3,777,233,422,046	2,585,115,826,580	2,585,115,826,580
Trade and other payables	53,710,834,297	53,710,834,297	72,834,611,107	72,834,611,107
Other financial liabilities	63,448,895,092	63,448,895,092	67,558,289,537	67,558,289,537
	₩ 5,036,088,915,738	₩ 5,036,088,915,738	₩ 4,372,506,398,942	₩ 4,372,506,398,942
	₩ 5,055,795,655,743	₩ 5,055,795,655,743	₩ 4,387,363,592,134	₩ 4,387,363,592,134

43.7 Fair value hierarchy

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

43.7 Fair value hierarchy (cont'd)

The following table provides the fair value measurement hierarchy of the Group's financial assets and liabilities as at December 31, 2016 and 2015 (Korean won):

	2016			
	Level 1	Level 2	Level 3	Total
Loans and receivables	₩ -	₩ 182,637,917,593	₩ 1,596,862,527,243	₩ 1,779,500,444,836
Available-for-sale financial assets	365,108,860	-	1,194,801,131	1,559,909,991
Derivative assets	11,297,815,182	-	-	11,297,815,182
	₩ 11,662,924,042	₩ 182,637,917,593	₩ 1,598,057,328,374	₩ 1,792,358,170,009
Borrowings	₩ -	₩ 1,141,695,764,303	₩ -	₩ 1,141,695,764,303
Bonds payable	-	3,777,233,422,046	-	3,777,233,422,046
Trade and other payables	-	-	53,710,834,297	53,710,834,297
Derivative liabilities	19,706,740,005	-	-	19,706,740,005
Other financial liabilities	-	-	63,448,895,092	63,448,895,092
	₩ 19,706,740,005	₩ 4,918,929,186,349	₩ 117,159,729,389	₩ 5,055,795,655,743

	2015			
	Level 1	Level 2	Level 3	Total
Loans and receivables	₩ -	₩ 146,834,133,161	₩ 1,393,779,971,041	₩ 1,540,614,104,202
Available-for-sale financial assets	288,396,164	-	1,576,334,051	1,864,730,215
Derivative assets	-	351,264,046	-	351,264,046
	₩ 288,396,164	₩ 147,185,397,207	₩ 1,395,356,305,092	₩ 1,542,830,098,463
Borrowings	₩ -	₩ 1,107,915,710,478	₩ -	₩ 1,107,915,710,478
Bonds payable	-	3,124,197,787,820	-	3,124,197,787,820
Trade and other payables	-	-	72,834,611,107	72,834,611,107
Derivative liabilities	14,857,193,192	-	-	14,857,193,192
Other financial liabilities	-	-	67,558,289,537	67,558,289,537
	₩ 14,857,193,192	₩ 4,232,113,498,298	₩ 140,392,900,644	₩ 4,387,363,592,134

There were no movements between levels for the years ended December 31, 2016 and 2015.

44. Related party transactions

The related parties of the Group are as follows:

	Name
Associates (*1)	YoungWoo Resources Co., Ltd., GMC, Korea Alumina, Jungchon Natural Graphite Cooperation, United Copper & Moly LLC, Philco Resource Ltd., Korean Boleo Corporation on S.A. de C.V., Saldebida Korea, Xian Maxun KORES New Material Co., Ltd., AnhuishengWonjin Mining Industry Co.,Ltd., ZhangjiagangWonjin-KORES Industrial Material Co., Ltd., ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd., POSCO KORES Yongxin Rare Earth Metal Co., Ltd., Enerchem, AnhuishengWonjinJinyuan Calcium Industry Co., Ltd, AMSA/DMSA(Ambatovy), K.K.LAO Mining Company, Haein Resource Corporation, KPMC, PT. DDS , PT. KCT , Capstone Mining Corp. , KCMC(Acquisition co.), Mukuze
Joint venture	Minerva, Moolarben, Athena, White Cliff, Marree, Boulia, Narrabri, Togara North, KLS, Cree-East, UltimatumChallenge Trading36 Ltd.

(*1) Equity investments in Korea Alumina and PT. DDS were reclassified as assets held for distribution in discontinued operations for the year ended December 31, 2015.

Transactions between inter-group entities have been eliminated and details have not been disclosed in the notes to the consolidated financial statements. The transactions with the Group, associates and joint ventures are as follows.

44. Related party transactions (cont'd)

Significant transactions with related parties (except finance and equity transactions) for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016			
	Name	Interest income	Dividend income	Commission income	Purchase of goods
Associates	YoungWoo Resources Co., Ltd	₩ 50,672,500	₩ -	₩ -	₩ -
	Korea Alumina	-	-	61,992,000	-
	Korean Boleo Corporation on S.A de C.V	6,542,214,630	-	-	-
	Xian Maxun KORES New Material Co., Ltd.	103,893,657	-	-	-
	AMSA/DMSA (Ambatovy)	36,690,496,120	-	3,769,878,722	20,872,390,299
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	42,893,495	108,326,430	-	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	92,064,149	-	-	-
	Enerchem	-	-	259,032,154	-
	KPMC	25,513,831,581	-	-	-
		₩ 69,036,066,132	₩ 108,326,430	₩ 4,090,902,876	₩ 20,872,390,299

		2015			
	Name	Interest income	Dividend income	Commission income	Purchase of goods
Associates	YoungWoo Resources Co., Ltd.	₩ 94,876,740	₩ -	₩ 144,000	₩ -
	Korea Alumina	-	-	88,392,000	-
	United Copper & Moly LLC	-	-	13,882,551	-
	Korean Boleo Corporation on S.A de C.V	1,572,484,494	-	-	-
	Xian Maxun KORES New Material Co., Ltd.	100,755,785	-	-	-
	AMSA/DMSA (Ambatovy)	55,607,879,741	-	733,806,494	14,076,803,265
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	58,422,785	289,351,790	88,660,591	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	125,373,070	1,013,413,714	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	123,228,303	-	-	-
	AnhuishengWonjinJinyuan Calcium Industry Co., Ltd.	-	341,826,182	-	-
	Haein Resources Co., Ltd	-	-	105,000	-
	KPMC	16,239,637,390	-	-	-
		₩ 73,922,658,308	₩ 1,644,591,686	₩ 924,990,636	₩ 14,076,803,265

44. Related party transactions (cont'd)

The outstanding receivables and payables arising from the transactions with related parties as at December 31, 2016 and 2015 are as follows (Korean won):

		2016			
	Name	Loans	Accrued Income	Other receivables	Advance
Associates	YoungWoo Resources Co., Ltd	₩ 2,414,010,000	₩ 3,846,260	₩ -	₩ -
	Korea Alumina	-	-	5,682,600	1,200,000,000
	Korean Boleo Corporation on S.A de C.V	125,442,300,000	8,163,671,564	-	-
	Xian Maxun KORES New Material Co., Ltd.	2,077,873,147	210,349,068	-	-
	AMSA/DMSA (Ambatovy)	559,683,560,271	1,532,874,294	64,613,688	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	792,776,000	2,234,975	1,879,405,109	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	1,701,568,000	4,797,019	2,664,742,500	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	2,567,256,320	532,259,052	-	-
	Haein Resource Corporation	2,611,270,000	-	4,246,500	-
	KPMC	359,841,962,057	-	-	-
		₩ 1,057,132,575,795	₩ 10,450,032,232	₩ 4,618,690,397	₩ 1,200,000,000

		2015				
	Name	Loans	Accrued Income	Other receivables	Trade payables	Advance
Associates	YoungWoo Resources Co., Ltd	₩ 2,666,590,000	₩ 3,931,220	₩ -	₩ -	₩ -
	Korea Alumina	-		5,682,600	-	-
	Korean Boleo Corporation on S.A de C.V	26,620,152,270	1,572,484,494	-	-	-
	Xian Maxun KORES New Material Co., Ltd.	2,015,115,704	103,240,167	-	-	-
	AMSA/DMSA (Ambatovy)	578,622,139,003	1,201,199,864	156,505,713	1,199,036,165	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	961,040,000	401,974,240	-	-	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	2,062,720,000	5,815,171	-	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	2,567,256,320	532,259,052	-	-	-
	Enerchem	-	-	7,333,337		217,800,107
	AnhuishengWonjinJinyuan Calcium Industry Co., Ltd.	-	341,826,182	-	-	-
	Haein Resource Corporation	2,711,270,000	-	3,821,850	-	-
	KPMC	228,539,817,470	-	-	-	-
		₩ 846,766,100,767	₩ 4,162,730,390	₩ 173,343,500	₩ 1,199,036,165	₩ 217,800,107

44. Related party transactions (cont'd)

Financial transactions (including investment) with related parties for the years ended December 31, 2016 and 2015 are as follows (Korean won):

		2016				
	Name	Loans	Equity investment	Loans collected	Loans collected (debt to equity swap)	Equity reduction
Associates	YoungWoo Resources Co., Ltd	₩ 598,000,000	₩ -	₩ 850,580,000	₩ -	₩ -
	United Copper & Moly LLC	-	5,968,031	-	-	-
	Korean Boleo Corporation on S.A. de C.V.	94,498,010,151	249,457,352	-	-	-
	AMSA/DMSA (Ambatovy)	97,640,241,803	134,487,000,000	-	134,487,000,000	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	-	-	192,208,000	-	3,200,922,461
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	-	-	412,544,000	-	3,765,957,522
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	-	-	100,000,000	-	-
	K.K.LAO Mining Company	-	24,198,000	-	-	-
	KPMC	120,149,536,581	3,961,277	-	-	-
Joint venture	KLS	-	1,933,073,863	-	-	-
		₩ 312,885,788,535	₩ 136,703,658,523	₩ 1,555,332,000	₩ 134,487,000,000	₩ 6,966,879,983

		2015			
	Name	Loans	Equity investment	Loans collected	Loans collected (debt to equity swap)
Associates	YoungWoo Resources Co., Ltd	₩ 615,000,000	₩ -	₩ 696,470,000	₩ -
	GMC	-	94,600,000	-	-
	United Copper & Moly LLC	-	11,766,686	-	-
	Korean Boleo Corporation on S.A. de C.V.	25,047,667,776	-	-	-
	AMSA/DMSA (Ambatovy)	137,281,260,364	382,109,400,000	-	382,109,400,000
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	-	-	180,268,800	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	-	-	386,918,400	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	-	11,414,101,962	-	-
	K.K.LAO Mining Company	-	33,234,000	-	-
	KPMC	77,622,437,390	22,287,281	-	-
Joint venture	KLS	-	4,128,506,034	-	-
		₩ 240,566,365,530	₩ 397,813,895,963	₩ 1,263,657,200	₩ 382,109,400,000

Details of garantees provided to related party as at December 31, 2016 are in note 45.

45. Guarantees and assets pledged

45.1 Details of guarantees provided to others as at December 31, 2016 are as follows (USD):

	Receiver	Provider	Currency	Amount	Reasons	Guarantee date	Guarantee period
AMSA/DMSA (Ambatovy)	Sherritt	Korea Exim Bank	USD	44,500,369	Construction guarantee	2013.08.22	2013.08.22 ~ 2023.07.05
			USD	424,362,275		2013.08.22	2013.08.22 ~ 2019.06.20
MMB	MMB	Underwriter of Global Bond payable	USD	340,000,000	Guarantee the bond issued by MMB	2014.05.07	2014.05.07 ~ 2019.05.07
			USD	105,042,017	Guarantee the bond issued by MMB (*1)	2014.11.12	2014.11.12 ~ 2019.11.12
			USD	85,000,000	Guarantee the bond issued by MMB (*1)	2014.12.03	2014.12.03 ~ 2019.12.03
			USD	120,000,000	Guarantee the bond issued by MMB	2015.07.01	2015.07.01 ~ 2019.05.07

(*1) The Company provided payment guarantees for the notes amounting to CHF100,000,000 and AUD100,000,000 issued by MMB, a subsidiary, and MMB entered into USD currency swap contracts for the notes under the payment guarantees by the Company in 2014. The Group disclosed the notes and swaps for which the Company provided payment guarantee.

45. Guarantees and assets pledged (cont'd)

45.2 Details of assets that have been pledged as collateral for others as at December 31, 2016 are follows (USD):

Provider	Collateral asset	Currency	Amount	Receiver	Reasons
AMSA/DMSA	Ambatovy Stock	USD	1,202,254,200	PF Creditor	PF Security

46. Commitments

Details of the major financing agreements guaranteed by the Group as at December 31, 2016 are as follow (Korean won, AUD):

Commitments	Financial institutions	Currency	Limit	Outstanding balance	Remained
Bank overdraft	Kookmin Bank	KRW	24,000,000,000	-	24,000,000,000
Comprehensive foreign currency loans	Kookmin Bank	KRW	16,000,000,000	-	16,000,000,000
Amortized Loan	Woori Bank	AUD	6,000,000	4,000,000	2,000,000
Working Capital Facility	Woori Bank	AUD	4,000,000	-	4,000,000

Refinancing Commitments
The partners in the Ambatovy Project, including the Group, have provided refinancing commitments to a syndicate of Project Financing (PF) lending institutions in order to defer repayment of $565 million of the PF loans. In the case of the Group receiving an additional request from the Ambatovy Project for refinancing, the Group has a contractual obligation to provide the Ambatovy Project with a loan to the extent of $127.5 million. For the year ended December 31, 2016, $67.8 million has been lent to the Ambatovy Project in accordance with the commitments.

47. Litigations

Details of litigations as at December 31, 2016 are as follows (Korean won):

Plaintiff	Details	Amount	Progress
Inni investment Co., Ltd.	In the confirmation trial for debt	₩ 42,420,000	In the first trial
POSCO DAEWOO Co., Ltd.	Arbitration for adjustment of shares	₩ 400,000,000	In the arbitration

48. Cash flow statement

Significant transactions not involving cash flows for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Refinancing of a current liabilities using long term debt	₩ -	₩ 374,755,476,903
Transfer of current portion of long-term borrowings and bonds	156,442,137,702	335,456,578,976
Transfer from construction-in-progress to property, plant and equipment	3,174,175,188	34,280,488,461
Debt to equity swap	134,487,000,000	382,109,400,000
Transfer of current portion of long-term loans	77,359,689,865	101,121,410,635

49. Assets held-for-sale

Assets held-for-sale as at December 31, 2016 and 2015 are detailed below:

	2016	2015
Equity securities held-for-sale:		
PT.DDS (*1)	₩ 13,505,600,632	₩ 13,097,694,251
Korea Alumina Co., Ltd.(*2)	7,761,518,215	10,348,690,953
	₩ 21,267,118,847	₩ 23,446,385,204

(*1) Prime Asia Resources, a subsidiary, entered into a contract to sell its equity interest in PT. DDS, an associate, to Prime Great Wise Capital Inc. and the equity sale will be completed on December 15, 2021. The Group has received ₩2,144,790,946 of an advance payment in 2016.
(*2) The Company entered into a contract to sell its equity interest in Korea Alumina Co., Ltd., an associate, to KC Co., Ltd. and received ₩1,200,000,000 of an advance payment in 2016. The equity sale will be completed on December 31, 2025. The Company recognized gain on disposal of investment in associates amounting to ₩1,094,327,262 from disposal of investment in associates amounting to ₩2,587,172,738.

50. Disposal of subsidiary

The Group has sold its investments in KORES CHILE SPA, a subsidiary, during the current reporting period

The fair value of disposal price is as follows (Korean won):

	2016
Cash and cash equivalents received.	₩ 1,032,454,679

The carrying amount of subsidiary's assets before being disposal is as follows (Korean won):

	2016
Current asset	₩
Cash equivalents	1,037,062,856

50. Disposal of subsidiary (cont'd)

Gain or loss on disposal of the subsidiary is as follows (Korean won):

		2016
Fair value of disposal	₩	1,032,454,679
Book value on net assets		1,037,062,856
Accrued exchange difference between net assets of subsidiary reclassified from equity (when losing control) and related cash flow hedge		2,270,227,533
Loss on disposal		(2,274,835,710)

Net cash flows provided from the disposal of the subsidiary are as follows (Korean won):

		2016
Cash and cash equivalents received	₩	1,032,454,679
Less: cash and cash equivalents disbursed		1,037,062,856
Net cash flow		(4,608,177)

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Independent auditors' report

The Board of Directors and Shareholders
Korea Resources Corporation

We have audited the accompanying consolidated financial statements of Korea Resources Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as at December 31, 2015 and 2014 and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Government Accounting Standards for Public Enterprises and Quasi-government Organizations "Government Accounting Standards", and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated 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 consolidated 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 consolidated 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 consolidated financial statements present fairly, in all material respects, the financial position of Korea Resources Corporation and its subsidiaries as at December 31, 2015 and 2014, and their financial performance and cash flows for the years then ended in accordance with *Government Accounting Standards*.

Other matters

Without qualifying our opinion, as described in Note 2 to the consolidated financial statements, the Group applies Korea International Financial Reporting Standards (KIFRS) where accounting provisions have not been specified under Government Accounting Standards.

Ernst & Young Han Young

February 24, 2016

This audit report is effective as at February 24, 2016, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditors' report to the time this report is used. Such events and circumstances could significantly affect the accompanying subsidiaries financial statements and may result in modifications to this report.

Korea Resources Corporation and its subsidiaries
Consolidated statements of financial position
As at December 31, 2015 and 2014
(Korean won in units)

	Notes	2015	2014
Assets			
Current assets			
Cash and cash equivalents	5,6,27	₩ 145,344,742,701	₩ 155,560,758,478
Current financial assets, net	6,7,10,11,42,44	116,362,554,471	136,719,327,938
Trade and other receivables, net	8,42,44	103,298,251,976	84,533,318,357
Inventories, net	12	107,853,313,086	91,294,522,692
Other current assets	13	13,367,159,443	17,509,889,769
Current tax asset		247,433,786	408,217,040
Assets held-for-sale		23,446,385,204	-
		509,919,840,667	486,026,034,274
Non-current assets			
Non-current financial assets, net	6,7,9,10,11,42,44	1,168,803,583,971	1,284,401,567,930
Long-term trade and other receivables, net	8	9,020,965,344	1,668,555,104
Property, plant and equipment, net	16,27	1,441,821,603,943	2,091,599,206,777
Investment properties, net	17	2,201,757,259	2,320,452,390
Goodwill, net	18	2,701,609,950	2,701,609,950
Intangible assets other than goodwill	19,27,44	72,613,602,685	106,846,847,637
Investments in associates and joint ventures	14,15,27,44	1,140,166,941,779	1,692,383,395,141
Deferred tax assets		122,077,377,046	-
Other non-current assets	13	218,154,072,750	184,021,769,098
		4,177,561,514,727	5,365,943,404,027
Total assets		**₩ 4,687,481,355,394**	**₩ 5,851,969,438,301**
Liabilities			
Current liabilities			
Trade and other payables	21,44	₩ 72,834,611,107	₩ 111,644,285,914
Current financial liabilities	7,20,22,23,42	985,570,319,192	1,380,635,320,602
Current provisions	26,44	4,340,555,556	6,230,353,800
Other current liabilities	28	3,906,643,954	9,990,318,800
		1,066,652,129,809	1,508,500,279,116
Non-current liabilities			
Non-current financial liabilities	7,20,22,23,24,42	3,328,958,661,835	2,379,954,319,684
Other non-current liabilities	28	51,002,390,460	52,076,179,550
Employee benefit liability	25	2,946,118,589	1,062,941,926
Deferred tax liabilities	40	-	6,721,261,900
Non-current provision	26	171,005,921,003	71,908,074,392
		3,553,913,091,887	2,511,722,777,452
Total liabilities		**4,620,565,221,696**	**4,020,223,056,568**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of financial position
As at December 31, 2015 and 2014 (cont'd)

(Korean won in units)

	Notes	2015	2014
Equity			
Issued capital	1,29	₩ 1,890,370,200,000	₩ 1,710,170,200,000
Discount on stock issuance		(2,048,521,362)	(2,000,521,362)
		1,888,321,678,638	1,708,169,678,638
Deficits	30,31		
Legal reserve		26,058,044,906	61,891,400,137
Other legal reserves		-	45,025,147,822
Undisposed deficits		(1,936,012,981,011)	(223,879,838,731)
		(1,909,954,936,105)	(116,963,290,772)
Other comprehensive income	25,32	150,861,978,322	32,606,988,825
Equity attributable to equity holders of the parent		129,228,720,855	1,623,813,376,691
Non-controlling interests		(62,312,587,157)	207,933,005,042
Total equity		**66,916,133,698**	**1,831,746,381,733**
Total equity and liabilities		**₩ 4,687,481,355,394**	**₩ 5,851,969,438,301**

The accompanying notes are an integral part of the consolidated financial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2015 and 2014
(Korean won in units)

	Notes		2015		2014
Sales	4,33,44	₩	297,925,153,355	₩	274,489,944,753
Cost of sales	41		(1,420,520,269,013)		(518,528,506,508)
Gross loss			**(1,122,595,115,658)**		**(244,038,561,755)**
Selling and administrative expenses	34,41		(34,680,210,474)		(29,808,596,488)
Operating loss			**(1,157,275,326,132)**		**(273,847,158,243)**
Other operating income	35		3,279,918,164		5,842,314,015
Other operating expenses	36		(99,226,967,265)		(374,646,884)
Other gain (loss), net	37		(934,415,865,895)		(1,130,328,928)
Finance income	38		12,952,790,938		14,557,083,792
Finance costs	39		(10,180,780,411)		(12,228,399,475)
Loss before tax			**(2,184,866,230,601)**		**(267,181,135,723)**
Income tax benefit	40		(121,292,215,805)		(3,711,391,077)
Loss for the year		₩	**(2,063,574,014,796)**	₩	**(263,469,744,646)**
Attributable to:					
Equity holders of the parent			(1,792,559,022,762)		(259,482,795,808)
Non-controlling interests			(271,014,992,034)		(3,986,948,838)
		₩	(2,063,574,014,796)	₩	(263,469,744,646)
Other comprehensive income (loss)					
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:					
Re-measurement loss on defined benefit plan		₩	(432,622,571)	₩	(1,041,661,147)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:					
Adjustment of government subsidy			125,171,010		75,480,870
Net gain on valuation of available-for-sale financial assets			14,894,996,364		3,045,692,176
Changes in equity in equity method investments			71,938,394,698		73,240,965,490
Effective portion of changes in fair value of cash flow hedge			(347,762,331)		(220,292,510)
Exchange differences on translation of foreign operations			32,413,589,591		34,554,660,603
Other comprehensive income for the year			118,591,766,761		109,654,845,482
Total comprehensive loss		₩	**(1,944,982,248,035)**	₩	**(153,814,899,164)**
Attributable to:					
Equity holders of the parent			(1,674,736,655,836)		(150,170,348,024)
Non-controlling interests			(270,245,592,199)		(3,644,551,140)
		₩	(1,944,982,248,035)	₩	(153,814,899,164)

The accompanying notes are an integral part of the consolidated financial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2015 and 2014
(Korean won in units)

	Attributable to equity holders of the parent				
	Issued capital	**Retained earnings (Deficits)**	**Other components of equity**	**Non-controlling interest**	**Total equity**
As at January 1, 2014	**₩ 1,483,079,057,956**	**₩ 149,231,407,015**	**₩ (106,941,005,890)**	**₩ 171,766,826,077**	**₩ 1,697,136,285,158**
Loss for the year	-	(259,482,795,808)	-	(3,986,948,838)	(263,469,744,646)
Other comprehensive income (loss)	-	(1,041,661,147)	110,354,108,931	342,397,698	109,654,845,482
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:					
Re-measurement losses on defined benefit plans	-	(1,041,661,147)	-	-	(1,041,661,147)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:					
Changes in equity adjustments in equity method investments	-	-	73,240,965,490	-	73,240,965,490
Gain on valuation of available-for-sale financial asset	-	-	3,045,692,176	-	3,045,692,176
Effective portion of changes in fair value of cash flow hedge	-	-	(220,292,510)	-	(220,292,510)
Exchange differences on translation of foreign operations	-	-	34,212,262,905	342,397,698	34,554,660,603
Adjustment of government subsidy	-	-	75,480,870	-	75,480,870
Total comprehensive loss	**-**	**(260,524,456,955)**	**110,354,108,931**	**(3,644,551,140)**	**(153,814,899,164)**
Issuance of share capital	224,900,000,000	-	-	-	224,900,000,000
Dividends paid	-	(4,939,860,150)	-	-	(4,939,860,150)
Decrease in other investments	(539,760,000)	-	-	-	(539,760,000)
Decrease in other distributions	730,380,682	(730,380,682)	-	-	-
Acquisition of shares in subsidiaries	-	-	29,193,885,784	39,810,730,105	69,004,615,889
Directly reflected in capital transaction with owners	225,090,620,682	(5,670,240,832)	29,193,885,784	39,810,730,105	288,424,995,739
As at December 31, 2014	**₩ 1,708,169,678,638**	**₩ (116,963,290,772)**	**₩ 32,606,988,825**	**₩ 207,933,005,042**	**₩ 1,831,746,381,733**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2015 and 2014 (cont'd)
(Korean won in units)

	Attributable to equity holders of the parent				
	Issued capital	**Retained earnings**	**Other components of equity**	**Non-controlling interest**	**Total equity**
As at January 1, 2015	**₩ 1,708,169,678,638**	**₩ (116,963,290,772)**	**₩ 32,606,988,825**	**₩ 207,933,005,042**	**₩ 1,831,746,381,733**
Loss for the year	-	(1,792,559,022,762)	-	(271,014,992,034)	(2,063,574,014,796)
Other comprehensive income (loss)	-	(432,622,571)	118,254,989,497	769,399,835	118,591,766,761
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:					
Re-measurement losses on defined benefit plans	-	(432,622,571)	-	-	(432,622,571)
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:					
Changes in equity adjustments in equity method investments	-	-	71,938,394,698	-	71,938,394,698
Gain on valuation of available-for-sale financial asset	-	-	14,894,996,364	-	14,894,996,364
Effective portion of changes in fair value of cash flow hedge	-	-	(347,762,331)	-	(347,762,331)
Exchange differences on translation of foreign operations	-	-	31,644,189,756	769,399,835	32,413,589,591
Adjustment of government subsidy	-	-	125,171,010	-	125,171,010
Total comprehensive income (loss)	**-**	**(1,792,991,645,333)**	**118,254,989,497**	**(270,245,592,199)**	**(1,944,982,248,035)**
Issuance of share capital	180,200,000,000	-	-	-	180,200,000,000
Decrease in other investment	(48,000,000)	-	-	-	(48,000,000)
Directly reflected in capital transaction with owners	180,152,000,000	-	-	-	180,152,000,000
As at December 31, 2015	**₩ 1,888,321,678,638**	**₩ (1,909,954,936,105)**	**₩ 150,861,978,322**	**₩ (62,312,587,157)**	**₩ 66,916,133,698**

The accompanying notes are an integral part of the consolidated financial statements.

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2014
(Korean won in units)

		2015		2014
Operating activities				
Loss for the year	₩	(2,063,574,014,796)	₩	(263,469,744,646)
Adjustments to reconcile loss (gain)				
for the year to net cash flows :				
Loss on valuation of inventories		22,629,800,000		3,902,201,258
Depreciation		28,044,725,229		20,426,572,862
Amortization of intangible assets		3,486,471,116		3,237,043,337
Loss on impairment of available-for-sale financial assets		40,162,749,269		-
Loss on impairment of investments in associates		97,655,536,392		12,091,220,872
Severance and retirement benefits		1,815,454,068		2,068,710,595
Bad debt expense		9,579,104,322		8,930,806,963
Other bad debt expenses		568,538,112		21,090,834
Loss on disposal of property, plant and equipment		727,869,016		5,165,723
Loss on disposal of intangible assets		129,064,939		-
Loss on impairment of tangible assets		941,535,246,976		-
Loss on Impairment of intangible assets		32,764,234,125		-
Loss on valuation of equity method investments		912,794,665,366		139,603,790,736
Loss on foreign currency translation		146,796,506,073		88,924,065,103
Loss on valuation of derivatives		8,217,204,099		5,702,659,585
Transfer of other provisions		97,467,036,000		-
Interest expenses		52,037,476,405		115,791,124,417
Income tax benefit		(121,292,215,805)		(3,711,391,077)
Other expenses		5,655,629,878		-
Reversal of allowance for doubtful accounts		(7,022,866,773)		(252,892,227)
Gain on disposal of property, plant and equipment		(41,759,329,538)		(60,962,988)
Gain on valuation of equity method investments		(346,832,409)		(4,657,199,285)
Gain on foreign currency translation		(104,453,305,454)		(73,700,589,100)
Gain on valuation of derivatives		-		(4,837,796,312)
Gain on disposal of investments in associates		(2,993,724,631)		-
Gain on exemption of liabilities		(1,775,609,097)		-
Interest income		(99,474,930,706)		(86,074,875,656)
		2,022,948,496,972		227,408,745,640

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2014 (cont'd)
(Korean won in units)

	2015	2014
Working capital adjustments:		
Current trade receivables	₩ 380,566,149	₩ (2,333,010,438)
Deposits	(7,352,155,333)	(498,765,438)
Other receivables	(12,407,774,058)	(21,492,639,174)
Inventories	(32,781,853,488)	(79,645,450,330)
Accrued income	(249,288,235)	(737,460,183)
Derivative assets	4,837,796,312	-
Advance payments	121,534,569	5,466,817,799
Prepaid expenses	1,600,174,915	6,421,984,008
Other current assets	(294,520,863)	1,345,751
Other non-current assets	(34,062,999,172)	(55,627,322,900)
Other payable	(48,329,718,916)	36,727,130,322
Derivative liabilities	-	(10,472,048,499)
Accrued expenses	(2,136,011,549)	3,734,109,458
Trade payables	1,239,182,157	(1,296,951,759)
Advance receipts	(5,408,320,677)	6,814,415,207
Withholdings	(422,599,438)	887,095,556
Unearned revenue	(232,557,308)	(68,406,340)
Payment of severance and retirement benefits	(183,169,157)	(5,626,265,770)
Other current liabilities	(1,898,547,000)	485,955,000
Other non-current liabilities	(4,730,994,605)	(7,662,380,897)
	(142,311,255,697)	(124,921,848,627)
Interest received	20,702,157,528	26,106,893,480
Interest paid	(105,592,877,475)	(99,843,161,688)
Income tax paid	(2,875,574,622)	(3,214,334,936)
Devidends received	1,380,536,975	11,498,972,037
Net cash flows used in operating activities	**(269,322,531,115)**	**(226,434,478,740)**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2014 (cont'd)
(Korean won in units)

	2015	2014
Investing activities		
Disposal of machinery	₩ 106,669,221	₩ 5,000,000
Disposal of vehicles	72,980,984	65,299,151
Disposal of other property, plant and equipment	10,362,500	-
Disposal of land	60,420,736,836	-
Disposal of buildings	4,605,860,011	-
Disposal of structrues	809,317,569	-
Disposal of investments in associates	15,995,288,301	-
Decrease in short-term financial instruments	4,212,756,772,372	2,864,052,740,301
Decrease in long-term financial instruments	682,477,791	35,111,242,535
Decrease in short-term loans	158,024,010,731	152,476,681,502
Decrease in long-term loans	44,244,697,770	8,077,314,371
Proceeds from government grants	3,119,380,550	187,716,306
Acquisition of land	(282,388,384)	-
Acquisition of buildings	(40,051,012,227)	(297,310,350)
Acquisition of structures	(124,978,855)	(288,905,000)
Acquisition of machinery	(2,057,931,094)	(102,008,386,100)
Acquisition of vehicles	(312,827,240)	(319,191,000)
Increase in construction in progress	(168,102,331,099)	(218,940,854,161)
Acquisition of other property, plant and equipment	(10,478,922,107)	(835,259,172)
Acquisition of exploration and evaluation assets	(3,649,741,313)	(2,349,013,242)
Acquisition of software	(3,984,591,485)	(1,280,158,303)
Acquisition of other intangible assets	-	(135,562,507)
Increase in short-term loans	(3,429,995,154)	(26,452,283,923)
Increase in long-term loans	(323,936,151,092)	(254,063,978,757)
Increase in available-for-sale financial assets	-	(1,151,174,598)
Increase in investments in associates	(11,575,989,929)	(1,162,272,382)
Increase in investments in joint ventures	(10,501,224,103)	(9,128,833,656)
Increase in short-term financial instruments	(4,213,382,621,964)	(2,714,358,407,789)
Net cash flows used in investing activities	**(291,022,151,410)**	**(272,795,596,774)**
Financing activities		
Increase in short-term borrowings	1,233,399,480,000	1,330,000,000,000
Increase in long-term borrowings	39,482,763,000	125,468,202,905
Issuance of bonds	1,202,580,827,625	758,730,707,288
Issuance of share capital	180,152,000,000	224,360,240,000
Change in ownership interest held by non-controlling interests that company does not lose control	-	14,174,880,424
Repayment of short-term borrowings	(1,230,000,000,000)	(1,448,751,808,760)
Repayment of current portion of long-term borrowings	(87,356,469,256)	(30,937,581,270)
Repayment of current portion of long-term bonds	(768,800,000,000)	-
Repayment of long-term borrowings	(11,769,000,000)	(306,116,677,460)
Dividends paid	-	(4,939,860,150)
Repayment of asset-backed loans	(15,320,666,531)	(13,221,629,976)
Net cash flows provided by financing activities	**542,368,934,838**	**648,766,473,001**

(Continued)

Korea Resources Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2014 (cont'd)
(Korean won in units)

		2015		2014
Net foreign exchange difference	₩	7,759,731,910	₩	(20,435,331,162)
Net increase (decrease) in cash and cash equivalents		(10,216,015,777)		129,101,066,325
Cash and cash equivalents as January 1		155,560,758,478		26,459,692,153
Cash and cash equivalents as December 31	₩	**145,344,742,701**	₩	**155,560,758,478**

The accompanying notes are an integral part of the consolidated financial statements.

1. Corporate information

Korea Resources Corporation (the "Company") was incorporated on June 5, 1967 under the "*Korea Mining Industry Promotion Agency* Act" (currently, the "*Korea Resources Corporation* Act") enacted on March 30, 1967. The Company was initially established as an integrated supporting organization for the mining industry to provide support for the development of private mines and to develop overseas mineral resources. Since 1967, the Company has been conducting technical and financial supporting activities in order to secure the necessary energy and mineral resources for the development of the national mining industry.

The Company's issued capital as at December 31, 2015 amounts to ₩1,890,370,200 thousand and the shareholders of the Company and their equity interest are as follows (Korean won in thousands):

Shareholders	Issued capital	Equity interest (%)
The Government of the Republic of Korea	₩ 1,887,670,200	99.86
Korea Development Bank	2,700,000	0.14
	₩ 1,890,370,200	100.00

(1) The Company's consolidated subsidiaries as at December 31, 2015 are as follows:

Subsidiary	Equity interest (%)	Major operating activities	Country of domicile
KORES Australia Pty Ltd.	100.00	Mining	Australia
KORES Canada Corp.	100.00	Mining	Canada
Minera Corocobre S.A	52.64	Mining	Bolivia
Sarisbury Limited	80.00	Mining	Niger
Stonebridge Trading 36	100.00	Mining	Republic of South Africa
KORES Chile SPA	100.00	Mining	Chile
Prime Asia Resources	100.00	Mining	Singapore
Ermani Ltd.	100.00	Mining	Tanzania
KORES Lux S.a.r.l	100.00	Mining	Luxembourg

(2) Significant financial information of the consolidated subsidiaries as at and for the year ended December 31, 2015 are as follows (Korean won in thousands):

Subsidiary	Total assets	Total liabilities	Sales	Profit (loss) before tax	Profit (loss) for the year
KORES Australia Pty Ltd.	₩ 271,765,172	₩ 36,927,702	₩ 39,888,182	₩ (56,169,663)	₩ (46,774,361)
KORES Canada Corp.	344,174,667	86,285,566	36,596	(229,316,719)	(229,316,719)
Minera Corocobre S.A	1,170,012	68,695	-	(10,686,507)	(10,686,507)
Sarisbury Limited	117	-	-	-	-
Stonebridge Trading 36	1,002,181	1,878	-	125,604	112,948
KORES Chile SPA	1,051,823	-	-	(90,822)	(90,822)
Prime Asia Resources	29,081,540	10,253	2,993,725	(2,384,941)	(2,384,941)
Ermani Ltd.	-	-	-	-	-
KORES Lux S.a.r.l	1,653,593,550	1,709,757,628	11,248,657	(1,081,172,421)	(973,216,175)

2. Basis of preparation and accounting policies

2.1 Basis of preparation

Korea Resources Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group") maintains its official accounting records in Korean won and prepare statutory financial statements in the Korean language in conformity with Government Accounting Standards for State-owned Entity and Quasi-government Organizations ("Government Accounting Standards"), and in accordance with the Article 2, paragraph 5 of Government Accounting Standards, Korea International Financing Reporting Standards ("KIFRS") are applied to the Authority's accounting treatments where not specified in Government Accounting Standards.

Certain accounting principles applied by the the Group that conform with *Government Accounting Standards* are as follows:

Government grants (Article 44 Accounting of Government grants)
Government grants that are earned for the acquisition of assets are recognized as a deduction from the assets and are recognized in profit or loss over the life of the assets by offsetting the depreciation. The Group recognizes the grants which are used for operating the program requested by the Government and the related Law or for compensating the differences incurred by the Government's price control, in profit or loss over the period.
Among the grants and consignment business budget designated by Article 48, the balances which are not expensed can be accounted as a deduction from the related assets.

Accounting of government project expenses (Article 48)
Government grants are recognized in the consolidated statement of comprehensive income over the periods in which the Group recognizes the related costs, for which the grants are intended to compensate as expense.

Contribution to employee welfare fund (Article 49)
The Group raises contribution to employee welfare fund according to contribution to employee welfare Law, and accounts it as operating expense.

There was none applied differently from Government Accounting Standards.

2.2 Standards issued but not yet effective

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below.

KIFRS 1109 Financial Instruments
The KASB issued the final version of KIFRS 1109 Financial Instruments that replaces KIFRS 1039 Financial Instruments: Recognition and Measurement and all previous versions. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. KIFRS 1109 is effective for annual periods beginning on or after January 1, 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.

KIFRS 1115 Revenue from Contracts with Customers
Under KIFRS 1115, revenue is recognized 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 new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. Early adoption is permitted.

2.2 Standards issued but not yet effective (cont'd)

Amendments to KIFRS 1111 Joint Arrangements: Accounting for Acquisitions of Interests
The amendments to KIFRS 1111 require that a joint operator accounting for the acquisition of an interest in a joint operation, in which the activity of the joint operation constitutes a business must apply the relevant KIFRS 1103 principles for business combinations accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation while joint control is retained. In addition, a scope exclusion has been added to KIFRS 1111 to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party. The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are prospectively effective for annual periods beginning on or after January 1, 2016, with early adoption permitted.

Amendments to KIFRS 1016 and KIFRS 1038: Clarification of Acceptable Methods of Depreciation and Amortization
The amendments clarify the principle in KIFRS 1016 and KIFRS 1038 that revenue reflects a pattern of economic benefits that are generated from operating a business (of which the asset is part) rather than the economic benefits that are consumed through use of the asset. As a result, a revenue-based method cannot be used to depreciate property, plant and equipment and may only be used in very limited circumstances to amortize intangible assets. The amendments are effective prospectively for annual periods beginning on or after January 1, 2016, with early adoption permitted. These amendments are not expected to have any impact to the Group given that the Group has not used a revenue-based method to depreciate its non-current assets.

Amendments to KIFRS 1027: Equity Method in Separate Financial Statements
The amendments will allow entities to use the equity method to account for investments in subsidiaries, joint ventures and associates in their separate financial statements. Entities already applying KIFRS and electing to change to the equity method in its separate financial statements will have to apply that change retrospectively. For first-time adopters of KIFRS electing to use the equity method in its separate financial statements, they will be required to apply this method from the date of transition to KIFRS. The amendments are effective for annual periods beginning on or after January 1, 2016, with early adoption permitted.

Amendments to KIFRS 1110 and KIFRS 1028: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
The amendments address the conflict between KIFRS 1110 and KIFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in KIFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. These amendments must be applied prospectively and are effective for annual periods beginning on or after January 1, 2016, with early adoption permitted.

The amendments to KIFRS 1001 Presentation of Financial Statements clarify, rather than significantly change, existing KIFRS 1001 requirements. The amendments clarify:
- The materiality requirements in KIFRS 1001
- That specific line items in the statement(s) of profit or loss and OCI and the statement of financial position may be disaggregated
- That entities have flexibility as to the order in which they present the notes to financial statements
- That the share of OCI of associates and joint ventures accounted for using the equity method must be presented in aggregate as a single line item, and classified between those items that will or will not be subsequently reclassified to profit or loss

Furthermore, the amendments clarify the requirements that apply when additional subtotals are presented in the statement of financial position and the statement(s) of profit or loss and OCI. These amendments are effective for annual periods beginning on or after January 1, 2016, with early adoption permitted.

2.2 Standards issued but not yet effective (cont'd)

The Company reviews whether the new standard has any impact on its financial statements and plans to adopt the new standard on the required effective date.

2.3 New and amended standards and interpretations

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2014, except for the adoption of new standards, interpretations and amendments as at January 1, 2015, noted below.

Amendments to KIFRS 1019 Defined Benefit Plans: Employee Contributions
KIFRS 1019 requires an entity to consider contributions from employees or third parties when accounting for defined benefit plans. Where the contributions are linked to service, they should be attributed to periods of service as a negative benefit. These amendments clarify that, if the amount of the contributions is independent of the number of years of service, an entity is permitted to recognize such contributions as a reduction in the service cost in the period in which the service is rendered, instead of allocating the contributions to the periods of service.

K IFRS 1102 Share-based Payment
This improvement is applied prospectively and clarifies various issues relating to the definitions of performance and service conditions which are vesting conditions. The clarifications are consistent with how the Group has identified any performance and service conditions which are vesting conditions in previous periods. In addition, the Group had not granted any awards during the second half of 2014 and 2015. Thus, these amendments did not impact the Group's financial statements or accounting policies.

K IFRS 1103 Business Combinations
The amendment is applied prospectively and clarifies that all contingent consideration arrangements classified as liabilities (or assets) arising from a business combination should be subsequently measured at fair value through profit or loss whether or not they fall within the scope of KIFRS 1039.

KIFRS 1108 Operating Segments
The amendments are applied retrospectively and clarify that:
• An entity must disclose the judgments made by management in applying the aggregation criteria in paragraph 12 of KIFRS 1108, including a brief description of operating segments that have been aggregated and the economic characteristics (e.g., sales and gross margins) used to assess whether the segments are 'similar'
• The reconciliation of segment assets to total assets is only required to be disclosed if the reconciliation is reported to the chief operating decision maker, similar to the required disclosure for segment liabilities

The Group has not applied the aggregation criteria in KIFRS1108.12. The Group has presented the reconciliation of segment assets to total assets as the reconciliation is reported to the chief operating decision maker for the purpose of decision making.

KIFRS 1016 Property, Plant and Equipment and KIFRS 1038 Intangible Assets
The amendment is applied retrospectively and clarifies in KIFRS 1016 and KIFRS 1038 that the asset may be revalued by reference to observable data by either adjusting the gross carrying amount of the asset to market value or by determining the market value of the carrying value and adjusting the gross carrying amount proportionately so that the resulting carrying amount equals the market value. In addition, the accumulated depreciation or amortization is the difference between the gross and carrying amounts of the asset.

KIFRS 1024 Related Party Disclosures
The amendment is applied retrospectively and clarifies that a management entity (an entity that provides key management personnel services) is a related party subject to the related party disclosures. In addition, an entity that uses a management entity is required to disclose the expenses incurred for management services.

2.3 New and amended standards and interpretations (cont'd)

KIFRS 1113 Fair Value Measurement

The amendment is applied prospectively and clarifies that the portfolio exception in KIFRS 1113 can be applied not only to financial assets and financial liabilities, but also to other contracts within the scope of KIFRS 1039.

KIFRS 1040 Investment Property

The description of ancillary services in KIFRS 1040 differentiates between investment property and owner-occupied property (i.e., property, plant and equipment). The amendment is applied prospectively and clarifies that KIFRS 1103, and not the description of ancillary services in KIFRS 1040, is used to determine if the transaction is the purchase of an asset or a business combination.

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. These amendments are not expected to have any impact to the Company. The Company intends to adopt these standards, if applicable, when they become effective.

2.4 Significant accounting policies

Significant accounting policies in accordance with KIFRS applied by the Group in the preparation of its consolidated financial statements are summarized below. These accounting policies have been applied consistently to the financial statements for the current period and accompanying comparative periods.

The consolidated financial statements have been prepared on a historical cost basis except for certain non-current assets and financial assets. Historical cost is based on the fair value of the consideration given in exchange for assets. The Group's significant accounting policies are as follows:

2.5 Basis of consolidation

The consolidated financial statements of the Group include the financial statements of the Company and its subsidiaries (including special-purpose entities) controlled by the Company. Control is achieved where the Company has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statements of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive income of 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.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used in the Group.

All intragroup transactions, balances, income and expenses are eliminated in full upon consolidation for the years ended December 31, 2015 and 2014.

Changes in the Company's ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Company'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 recognized directly in equity and attributed to owners of the Company.

2.5 Basis of consolidation (cont'd)

When the Company loses control of a subsidiary, the income or loss on disposal 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), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in other comprehensive income and accumulated in equity, the amounts previously recognized in other comprehensive income and accumulated in equity are accounted for as if the Company had directly disposed the relevant assets (i.e., reclassified to income or loss or transferred directly to retained earnings).

The fair value of any investment retained in the former subsidiary at the date when control is recognized as the fair value on initial recognition for subsequent accounting under KIFRS 1039 Financial Instruments: Recognition and Measurement or, when applicable, the cost on initial recognition of an investment in an associate or a jointly controlled entity.

2.6 Investment in associates

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. An entity is considered to have significant power when it is applicable one or more among followings.

① Being able to participate in Board of Directors meetings or equivalent organization, ② Being able to participate in process of making decisions including distribution of dividends or others, ③ Significiant transactions between the entity and the investee company ④ Mutual interchange in management ⑤ Providing essential technical information.

The results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105 Non-current Assets Held for Sale and Discontinued Operations. Under the equity method, an investment in an associate is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of profit or loss and other comprehensive income of the associate. When the Group's share of losses of an associate exceeds the Group's interest in that associate (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

The requirements of KIFRS 1039 Financial Instruments: Recognition and Measurement are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with KIFRS 1036 Impairment of Assets as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount, any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with KIFRS 1036 to the extent that the recoverable amount of the investment subsequently increases.

When a Group entity transacts with its associate, incomes and losses resulting from the transactions with the associate are recognized in the Group's consolidated financial statements only to the extent of interests in the associate that are not related to the Group.

2.7 Joint ventures

A joint venture is a contractual arrangement whereby the Group and other parties undertake an economic activity that is subject to joint control (i.e. when the strategic financial and operating policy decisions relating to the activities of the joint venture require the unanimous consent of the parties sharing control). Joint venture arrangements that involve the establishment of a separate entity in which each venture has an interest are referred to as jointly controlled entities.

When the Group performs economic activity under joint arrangements, the Group's share in joint entity and in liabilities which are made in collaboration with other participants are recognized in consolidated financial statements and classified by nature. The liabilities and expensed that is occurred directly regarding to the share in joint venture are accounted for accrual basis. The profits and expensed which are generated from transferring the Group's share are recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured.

The Group reports its interests in jointly controlled entities using the equity method, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105.

Any goodwill arising on the acquisition of the Group's interest in a jointly controlled entity is accounted for in accordance with the Group's accounting policy for goodwill arising in a business combination.

When the Group transacts with its jointly controlled entity, income and loss resulting from jointly controlled entities are recognized in the Group's consolidated statements only to the extent of interests in the jointly controlled entity that are not related to the Group.

2.8 Goodwill

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying value, an impairment loss is recognized to goodwill and then other aseets proportionately. Impairment losses related to goodwill cannot be reversed in the future periods.

When disposing of CGU, the related goodwill amount is included in gain or loss from disposal.

Accounting policy for goodwill from acquisition of a related company is explained in Note 2.6.

2.9 Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duty.

Sale of goods
Revenue from the sale of goods is recognized when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on delivery of the goods.

Rendering of services
Revenue from rendering of service is recognized using the percentage-of-completion method. The Group determines the percentage of completion using reliable measurement methods such as the level of work performed, the ratio of the cumulative workload incurred to date to the total estimated workload, the ratio of the cumulative costs incurred to date to the total estimated cost according to the nature of the transaction.

2.9 Revenue recognition (cont'd)

Interest income

For all financial instruments measured at amortized cost and interest-bearing financial assets classified as available-for-sale, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability.

2.10 Foreign currencies

The individual financial statements of each subsidiary are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Company entity are expressed in KRW which is the functional currency of the Group and the presentation currency for the consolidated financial statements.

For the purpose of the individual financial statements, the transaction that is accomplished with not functional currency but other currency is recorded using exchange rate at the date of transaction. Monetary assets and liabilities are translated using exchange rate of the date at the end of every reporting period. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. Whereas, non-monetary items measured at historical cost are not translated.

Exchange differences are recognized in profit or loss in the period in which they arise except for:

exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;

exchange differences on transactions entered into in order to hedge certain foreign currency risks (see Note 43.2 below for hedging accounting policies); and

exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

2.11 Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attached to the grants and that the receipt of the grants are probable.

Government grants are recognized in the consolidated statement of comprehensive income over the periods in which the Group recognizes the related costs, for which the grants are intended to compensate as expense. Specifically, government grants, which are conditional to the Group purchasing, constructing or otherwise acquiring non-current assets, are recognized as deductions for related assets in the consolidated statement of financial position and transferred to profit or loss over the estimated useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

In addition, a benefit from a government loan at a below-market interest rate is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

2.12 Pension benefits

Payments to defined contribution plans are expensed as incurred, which is when the employees render service.

For defined benefit pension plans and other post-employment benefits, the net periodic pension expense is actuarially determined on an annual basis by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related pension liability.

All actuarial gains and losses that arise in calculating the present value of the defined benefit obligation and the fair value of plan assets are recognized immediately in retained earnings and included in the statement of comprehensive income. The vested portion of past service cost arising from plan amendments is recognized immediately in the income statement. The unvested portion is amortized on a straight-line basis over the average remaining period until the benefits become vested.

The asset or liability recognized in the statement of financial position is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, together with adjustments for unrecognized past service costs. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

2.13 Income tax

Income tax consists of current tax and deferred tax.

Current tax
The tax currently payable is based on taxable income for the year. Taxable income differs from income as reported in the consolidated statement of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax
Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable income. Deferred tax liabilities are generally recognized for all taxable temporary differences.

Deferred tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable income will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable income nor the accounting income.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable income against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable income will be available to allow all or part of the asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are

2.13 Income tax (cont'd)

Expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Current and deferred tax for the year

Current and deferred tax are recognized in income or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

2.14 Property, plant and equipment

Property, plant and equipment is measured initially at cost. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and accumulated impairment losses.

The cost of an item of property, plant and equipment is directly attributable to their purchase or construction, which 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. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful years of the assets as follows:

	Years	Depreciation method
Buildings	20 - 40	Straight-line method
Structures	20	Straight-line method
Machinery	5 - 10	Straight-line method
Vehicles	7	Straight-line method
Others	5 - 10	Straight-line method

If the cost of a part of property, plant and equipment is significant compared to the overall total cost of the property, plant and equipment, the cost of the part is separately depreciated from the related property, plant and equipment.

The Group reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectation differs from previous estimates, the changes were accounted for as a change in an accounting estimate.

Property, plant and equipment are derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from de-recognition of a property, plant and equipment, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in income or loss when the asset is derecognized.

2.15 Investment properties

The real estate to obtain rental income or capital appreciation are classified as investment properties. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred. Investment properties consist of land which are not depreciated.

Investment properties and any significant part initially recognized are derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on de-recognition of the asset is included in the statement of comprehensive income when the asset is derecognized.

2.16 Intangible assets

Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses. Amortization of intangible assets is provided using the straight-line method over the estimated useful life of the assets as follows:

	Estimated useful lives	Amortization methods
Software	10 years	Straight-line method
Industrial proprietary rights	5 years	Straight-line method
Mining right	Terms of Use	Proportional to output method

Internally generated intangible assets—research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred. An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following have been demonstrated:

the technical feasibility of completing the intangible asset so that it will be available for use or sale;
the intention to complete the intangible asset and use or sell it;
the ability to use or sell the intangible asset;
how the intangible asset will generate probable future economic benefits;
the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. When the development expenditure does not meet the criteria listed above, an internally generated intangible asset cannot be recognized and the expenditure is recognized in profit or loss in the period in which it is incurred.

Termination of intangible assets

An intangible asset is derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from de-recognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in income or loss when the asset is derecognized.

2.17 Impairment of non-financial assets except for goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets with definite useful lives to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.
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Recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in income or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in income or loss.

2.18 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of inventories, except for those in transit, are measured under the weighted average method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

The carrying amount of inventories sold in the period and the amount of any write-down of inventories to net realizable value and all losses of inventories in the period; less the amount of any reversal in the period of any write-down of the inventories, arising from an increase in net realizable value, is recognized as an expense during the period.

2.19 Provisions

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

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material). Provisions for estimated future costs are discounted to present value, based on a discount rate which reflects the current market assessment of the time value of money, risks specific to the liability and pre-tax. Increase in provisions due to passage of time is recognized as finance expense during the period.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

2.19 Provisions (cont'd)

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

Evaluation of performance incentives
The Ministry of Strategy and Finance conducts an annual performance evaluation on an organization-wide basis for SOE's and the calculation of inividual performance incentives are partly based on such results. The previsions for incentives are provided for in accordance with KIFRS 1037 and recognized as provisions for employee benefits.

2.20 Financial assets

All financial assets are recognized and derecognized on the 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 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 at fair value through profit or loss' (FVTPL), 'held-to-maturity investments', 'available-for-sale financial assets' and 'loans and receivables'. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

(a) Effective interest method
The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Income is recognized on an effective interest basis for debt instruments other than those financial assets classified as FVTPL.

(b)Financial assets at fair value through profit or loss (FVTPL)

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value, with net changes in fair value presented as finance costs (negative net changes in fair value) or finance income (positive net changes in fair value) in the statement of profit or loss.

Transaction costs related to the acquisition of financial assets at fair value through profit or loss are expensed on initial recognition.

A financial asset is classified as held for trading if:

it has been acquired principally for the purpose of selling it in the near term; or
on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
it is a derivative, including an embedded derivative that is not designated and effective as a hedging instrument.

2.20 Financial assets (cont'd)

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if:

such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
the financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and its' performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
it forms part of a contract containing one or more embedded derivatives, and KIFRS 1039 Financial Instruments: Recognition and Measurement permits the entire combined contract (asset or liability) to be designated as at FVTPL

Financial assets at FVTPL are stated at fair value, with any gains or losses arising on re-measurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset and is included in finance income and finance cost in the consolidated statement of comprehensive income.

(c) Held-to-maturity investments
Financial assets with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortized cost using the effective interest method less any impairment, with revenue recognized on an effective yield basis.

(d) Available-for-sale financial assets ("AFS")
Financial assets that are not classified as at held-to-maturity; held-for-trading; designated as FVTPL; or loans and receivables are classified as AFS. Gains and losses arising from changes in fair value are recognized in other comprehensive income and accumulated in the valuation reserve. However, impairment losses, interest calculated using the effective interest method, and foreign exchange gains and losses on monetary assets are recognized in profit or loss. Unquoted equity investments which are not traded in an active market, whose fair value cannot be measured reliably are carried at cost. Where the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the valuation reserve is reclassified to income or loss. Dividends on AFS equity instruments are recognized 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 end of the reporting period. The foreign exchange gains and losses that are recognized in profit or loss are determined based on the amortized cost of the monetary asset. Other foreign exchange gains and losses are recognized in other comprehensive income.

(e) Loans and receivables
Trade receivables, loans, and other receivables that have fixed or determinable payments that are not traded in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortized cost using the effective interest method, less any impairment. Interest income is recognized by applying the effective interest rate, except for short-term receivables whose period interest income is immaterial.

(f) Impairment of financial assets
Financial assets, other than those at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For listed and unlisted equity investments classified as AFS, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment in addition to the criteria mentioned below.

2.20 Financial instrument (cont'd)

For all other financial assets, objective evidence of impairment include:

significant financial difficulty of the issuer or counterparty; or
breach of contract, such as a default or delinquency in interest or principal payments; or
it becoming probable that the borrower will enter bankruptcy or financial re-organization; or
the disappearance of an active market for that financial asset because of financial difficulties.

For certain categories of financial asset, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Objective evidence of impairment for a portfolio of receivables could include the Group's past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period and, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets recorded at amortized cost, the amount of the impairment loss recognized is 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.

For financial assets carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss.

When an AFS financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

In respect of AFS equity securities, impairment losses previously recognized in profit or loss are not reversed through profit or loss. Any increase in fair value subsequent to an impairment loss is recognized in other comprehensive income. In respect of AFS debt securities, impairment losses are subsequently reversed through profit or loss if an increase in the fair value of the investment can be objectively related to an event occurring after the recognition of the impairment loss.

(g) De-recognition of financial assets
The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On de-recognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.

2.20 Financial instrument (cont'd)

On de-recognition of a financial asset other than in its entirety (e.g. when the Group retains an option to repurchase part of a transferred asset), the Group allocates the previous carrying amount of the financial asset between the part it continues to recognize under continuing involvement, and the part it no longer recognizes on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognized and the sum of the consideration received for the part no longer recognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income is recognized in income or loss. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is no longer recognized on the basis of the relative fair values of those parts.

2.21 Financial liabilities and equity instruments

Classification as debt or equity
Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Equity instruments
An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Group's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in income or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments.

Financial liabilities
Financial liabilities are classified as either financial liabilities at FVTPL or other financial liabilities.

Financial liabilities at FVTPL
Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as FVTPL.

A financial liability is classified as held for trading if:

- It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- It is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and KIFRS 1039 Financial Instruments: Recognition and Measurement permits the entire combined contract (asset or liability) to be designated as at FVTPL.

2.21 Financial liabilities and equity instruments (cont'd)

Other financial liabilities

Other financial liabilities are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

Other financial liabilities are initially measured at fair value, net of transaction costs.

The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

2.22 Derivative financial instruments and hedge accounting

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate and foreign exchange rate risk, including interest rate swaps and others.

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently re-measured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in income or loss immediately unless the derivative is designated and effective as a hedging instrument, in such case the timing of the recognition in income or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset; a derivative with a negative fair value is recognized as a financial liability. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

(a) Hedge accounting
The Group designates certain hedging instruments, which include derivatives, embedded derivatives and non-derivatives in respect of foreign currency risk, as either fair value hedges or cash flow hedges. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item.

(b) Cash flow hedges
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 and accumulated under the heading of reverse for gains (loss) on valuation of derivatives. The gain or loss relating to the ineffective portion is recognized immediately in income or loss, and is included in the 'finance income and costs.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to income or loss in the periods when the hedged item is recognized in income or loss, in the same line of the consolidated statement of comprehensive income as the recognized hedged item. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Hedge accounting is discontinued when the Group revokes the hedging relationship, when the hedging instrument expires or is sold, terminated, or exercised, or it no longer qualifies for hedge accounting. Any gain or loss accumulated in equity at that time remains in equity and is recognized when the forecast transaction is ultimately recognized in income or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

3. Significant accounting judgments, estimates and assumptions

The Group makes assumptions and estimates concerning the future. Assumptions and estimations are verified continuously based on the past experience and reasonably expected future event. This accounting estimation, however, could be different from actual results. Assumptions and estimations for significant risks which may cause adjustments to the carrying amounts of assets and liabilities are as follows:

3.1 Taxes

The Group' business carries on business on a variety of nations and income tax expense coming from operating activities is calculated by tax law and tax authorities of different nations. Accordingly, there are uncertainties to make final tax effect on taxable income. The Group recognized expected corporate tax effect as current corporate tax expense and deferred corporate taxes using best estimation. Real corporate tax burden, however, may not consist with related assets or liabilities in the future, which may cause changes in assets or liabilities at the time of confirmation of corporate tax effect.

3.2 Fair value of financial instruments

The fair value of financial instruments which does not trade in active market is principally decided using valuation method. The Group selects various valuation methods and makes a judgment about assumptions based on key market circumstances as at December 31, 2015.

3.3 Provision

The Group recognizes provision for employee performance bonus as a result of assessment in accordance with guide line from the Ministry of Strategy and Finance (see Note 2.16).

3.4 Pension benefits

The present value of the defined benefit pension can be changed depending on various factors determined using actuarial valuations. Assumptions to determine pension cost (profit) include discount rate, where changes in assumptions will lead changes in present value of the defined benefit pension. The Group has determined discount rate every year end which is defined as interest rate used to decide present value of expected future cash outflow. The Group determines discount rate considering discount rate of outstanding corporate bond which has similar maturity with pension obligation. Other assumptions related with pension obligation are based on market circumstance (see Note 25).

4. Operating segment information

For management purposes, the Group is organized into business units based on their services and has two reportable operating segments. The strategic business units are managed separately as they offer other services and technology, and marketing strategies are different.

The reporting segments of the Group are as follows:

	Service
Financing	Capital loans and direct investments in domestic and overseas mining projects
Others	Mineral reserves, mineral exploration and development survey/study/technical guidance/business feasibility

A summary of the Group's financial information by business segment for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Total segment sales	Sales from external customers	Segment operating loss	Depreciation/ amortization
Financing	₩ 271,561,502	₩ 271,561,502	₩ (1,102,164,936)	₩ 20,680,145
Others	26,363,651	26,363,651	(55,110,390)	5,764,898
	₩ 297,925,153	₩ 297,925,153	₩ (1,157,275,326)	₩ 26,445,043

	2014			
	Total segment sales	Sales from external customers	Segment operating loss	Depreciation/ amortization
Financing	₩ 244,085,706	₩ 244,085,706	₩ (219,907,344)	₩ 17,362,977
Others	30,404,239	30,404,239	(53,939,814)	6,300,639
	₩ 274,489,945	₩ 274,489,945	₩ (273,847,158)	₩ 23,663,616

(*1) The management of the Group evaluates the performance of each segment based on the segment operating results.

Assets and liabilities by business segment as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Segment assets	Investment in associates	Acquisition of non-current assets	Segment liabilities
Financing	₩ 2,706,443,425	₩ 1,080,781,276	₩ 346,013,365	₩ 4,387,363,592
Others	1,981,037,930	-	229,044,724	233,201,630
	₩ 4,687,481,355	₩ 1,080,781,276	₩ 575,058,089	₩ 4,620,565,222

	2014			
	Segment assets	Investment in associates	Acquisition of non-current assets	Segment liabilities
Financing	₩ 3,199,706,164	₩ 1,638,949,059	₩ 95,405,003	₩ 3,872,233,926
Others	2,652,263,274	-	426,303,731	147,989,130
	₩ 5,851,969,438	₩ 1,638,949,059	₩ 521,708,734	₩ 4,020,223,056

(*1) Assets and liabilities of reporting segments reported to the Strategic Planning Committee have been derived in the same way with assets and liabilities of the consolidated financial statements and allocated based on sales per segment.

4. Operating segment information (cont'd)

Details of geographic information on continuing operations and non-current assets for the years ended ecember 31, 2015 and 2014 are as follows (Korean won in thousands):

	Sales from external customers		Non-current assets	
	2015	2014	2015	2014
Korea	₩ 243,757,993	₩ 221,040,463	₩ 2,158,474,664	₩ 2,445,275,442
Australia	39,888,182	40,829,998	254,575,475	297,332,862
Canada	36,596	5,024,568	340,165,592	538,581,531
Bolivia	-	-	1,098,142	10,925,224
Niger	-	-	117	110
Singapore	2,993,725	217,511	-	25,030,156
Luxembourg	11,248,657	7,377,404	1,423,247,525	2,048,798,079
	₩ 297,925,153	₩ 274,489,944	₩ 4,177,561,515	₩ 5,365,943,404

The group has no single customer whose sales represents 10% or more of the Group's total sales for the years ended December 31, 2015 and 2014.

5. Cash and cash equivalents

Cash and cash equivalents presented in the consolidated statement of cash flows includes cash on hand, bank deposits but excludes bank overdrafts. Reconciling adjustments for cash and cash equivalents on the consolidated statements of financial position are as follows (Korean won in thousands):

	2015	2014
Cash and cash equivalents	₩ 147,913,888	₩ 158,047,050
Government grants	(2,569,145)	(2,486,292)
	₩ 145,344,743	₩ 155,560,758

6. Restricted cash and cash equivalents

Cash and cash equivalents restricted in use and financial assets pledged as at December 31, 2015 and 2014 consist of the followings (Korean won in thousands):

		2015	2014
Cash and cash equivalents	Government grant	₩ 2,569,145	₩ 2,486,292
Cash and cash equivalents	Reserve for environmental restoration	98,585	-
Short-term financial instruments	Expenses in subsidiaries	-	791,782
Long-term financial instruments	Employee related liabilities	8,184	7,694
		₩ 2,675,914	₩ 3,285,768

7. Derivatives

Details of derivatives as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015		2014
Derivative assets:				
Interest swaps	₩	351,264	₩	896,188
Currency forwards		-		4,837,796
	₩	351,264	₩	5,733,984
Derivative liabilities:				
Currency swaps (*1)		14,857,193		5,951,618
	₩	14,857,193	₩	5,951,618

(*1) Represent amount related to the bonds issued by Mineray Metalurgica del Boleo ("MMB") and the Company provided guarantees for the currency swaps and bonds issued.

Details of currency swaps as at December 31, 2015 are as follows (Korean won in thousands):

	Counterpart	Date of issuance	Maturity	Contract Exchange Rate	Sell interest rate(%)	Buy interest rate(%)	Contract Amount Sell	Contract Amount Purchase
Held for Trading	Standard Chartered Bank Korea Limited	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 31,512,605	CHF 30,000,000
	The Hongkong and Shanghai Banking Corporation Limited	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 31,512,605	CHF 30,000,000
	BNP PARIBAS	2014-10-23	2019-11-12	USD 1 = CHF 0.952	2.69	0.77	USD 42,016,807	CHF 40,000,000
	Standard Chartered Bank Korea Limited	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 21,250,000	AUD 25,000,000
	The Hongkong and Shanghai Banking Corporation Limited	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 21,250,000	AUD 25,000,000
	BNP PARIBAS	2014-11-26	2019-12-03	USD 1 = AUD 1.176	2.67	4.13	USD 42,500,000	AUD 25,000,000
							USD 190,042,017	CHF 100,000,000 AUD 75,000,000

Details of interest rate swaps as at December 31, 2015 are as follows (Korean won in thousands):

	Counterpart	Period	Principal	Contract interest rate (%) Sell	Contract interest rate (%) Purchase
Hedge for cash flow	Kookmin Bank	2013.11.26-2016.11.25	USD 80,000,000	Fixed Rate 1.70	3M Libor+1.05
	Nova Scotiabank	2013.11.26-2016.11.25	USD 80,000,000	Fixed Rate 1.70	3M Libor+1.05
	Standard Chartered Bank Korea Limited	2013.11.26-2016.11.26	USD 50,000,000	Fixed Rate 1.70	3M Libor+1.05
	The Hongkong and Shanghai Banking Corporation Limited	2013.11.26-2016.11.26	USD 50,000,000	Fixed Rate 1.70	3M Libor+1.05

Details of gain (loss) on derivative transactions for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	Gain (loss) on valuation				Gain (loss) on settlement				Other comprehensive income (*1)			
	2015		2014		2015		2014		2015		2014	
Currency forwards	₩	-	₩	4,837,796	₩	327,404	₩	(9,217,287)	₩	-	₩	-
Interest swaps		-		-		(1,104,249)		(1,155,812)		(347,762)		(220,293)
Currency swaps		(8,217,204)		(5,702,660)		-		1,858,532		-		-
	₩	(8,217,204)	₩	(864,864)	₩	(776,844)	₩	(8,514,567)	₩	(347,762)	₩	(220,293)

(*1) Loss on valuation of derivative financial assets amounting to ₩347,712 thousand (2014: ₩ 220,293 thousand) for the year ended December 31, 2015 is recognized in other comprehensive income and directly reflected in equity, net of income tax effect.

8. Trade and other receivables

Details of trade and other receivables as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 1,946,186	₩ -	₩ 1,946,186
Other receivables	97,560,276	(1,159,985)	96,400,291
Accrued income	5,489,334	(537,559)	4,951,775
	104,995,796	(1,697,544)	103,298,252
Non-current assets:			
Other receivables	4,388,943	(4,388,688)	255
Deposits	9,020,710	-	9,020,710
	13,409,653	(4,388,688)	9,020,965
	₩ 118,405,449	₩ (6,086,232)	₩ 112,319,217

	2014		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 2,323,215	₩ -	₩ 2,323,215
Other receivables	78,250,709	(1,123,881)	77,126,828
Accrued income	5,189,905	(106,629)	5,083,276
	85,763,829	(1,230,510)	84,533,319
Non-current assets:			
Other receivables	4,388,688	(4,388,688)	-
Deposits	1,668,555	-	1,668,555
	6,057,243	(4,388,688)	1,668,555
	₩ 91,821,072	₩ (5,619,198)	₩ 86,201,874

Aging analysis of trade and other receivables as at December 31, 2015 and 2014 is as follows (Korean won in thousands):

	2015		2014	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Neither overdue nor impaired	₩ 1,946,186	₩ 110,376,291	₩ 2,323,215	₩ 84,407,700
Overdue but not impaired receivables:				
60～90 days	-	10,593	-	5,765
Impaired receivables:				
90~120 days	-	-	-	-
More than 120 days	-	6,072,379	-	5,084,391
	1,946,186	116,459,263	2,323,215	89,497,856
Less allowance for doubtful accounts	-	(6,086,232)	-	(5,619,198)
	₩ 1,946,186	₩ 110,373,031	₩ 2,323,215	₩ 83,878,658

8. Trade and other receivables (cont'd)

Changes in allowance for doubtful accounts for trade and other receivable for the years ended December 31, 2015 and 2014 are follows (Korean won in thousands):

		2015		2014
Balance as at January 1	₩	5,619,198	₩	5,598,851
Provision for allowance		568,538		21,090
Reversal of allowance		(101,504)		(743)
Balance as at December 31	₩	6,086,232	₩	5,619,198

The Group considers the change of credit ratings of trade and other receivables to assess their collectability from the date of credit grant to the reporting date. Concentration of credit risk is limited as the Group has numerous clients with no mutual relevance.

9. Available-for-sale financial assets

Details of available-for-sale financial assets as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015 (*1)		2014 (*1)
Korea Minerals Co., Ltd. (*2)	₩	-	₩	1,200,000
Global Dynasty Fund (*2)		670,022		670,022
Troika Fund (*2)		524,079		4,119,887
SEDEX Minerals Limited (*2)		-		26,157,312
Se-ah M&S Co., Ltd. (*2)		1,715,410		5,995,187
Investments of Shinhyup		40,000		40,000
Available-for-sale financial assets owned by KORES Australia Pty. Ltd.		261,923		796,922
Available-for-sale financial assets owned by KORES Canada Corp.		26,473		95,921
Niger		118		110
	₩	3,238,024	₩	39,075,361

(*1) The amounts above include government grants amounting to ₩1,373,295 thousand.

(*2) ₩40,162,749 thousand of an impairment loss on available-for-sale financial assets was recognized for the year ended December 31, 2015.

10. Current and non-current loans

Details of current and non-current loans as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

2015	Gross amounts	Allowance for doubtful accounts	Present value discounts	Government grants	Book value
Current loans	₩ 121,045,031	₩ (6,783,290)	₩ (186,959)	₩ -	₩ 114,074,781
Non-current loans	1,203,936,902	(27,321,811)	(7,627,182)	(2,057,239)	1,166,930,670
	₩ 1,324,981,933	₩ (34,105,101)	₩ (7,814,141)	₩ (2,057,239)	₩ 1,281,005,451

2014	Gross amounts	Allowance for doubtful accounts	Present value discounts	Government grants	Book value
Current loans	₩ 134,388,048	₩ (2,518,481)	₩ (885,683)	₩ -	₩ 130,983,884
Non-current loans	1,293,480,073	(28,863,307)	(10,178,108)	(2,057,239)	1,252,381,419
	₩ 1,427,868,121	₩ (31,381,788)	₩ (11,063,791)	₩ (2,057,239)	₩ 1,383,365,303

Details of changes in allowance for doubtful accounts as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Neither overdue nor impaired :	₩ 1,312,171,482	₩ 1,413,754,440
Overdue but not impaired receivables :		
60～90 days	-	-
90～120 days	-	155,069
Impaired receivables :		
60～90 days	4,250,387	2,543,235
90～120 days	-	-
More than 120 days	8,560,064	11,415,378
	1,324,981,933	1,427,868,122
Less allowance for doubtful accounts	(34,105,101)	(31,381,788)
Less present value discounts	(7,814,142)	(11,063,791)
Less government grants	(2,057,239)	(2,057,239)
	₩ 1,281,005,451	₩ 1,383,365,304

Changes in allowance for doubtful accounts for loans for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Balance as at January 1	₩ 31,381,788	₩ 22,623,753
Bad debt expense	9,579,104	8,930,807
Reversal of unused amounts	(6,921,362)	(252,149)
Others	65,571	79,377
Balance as at December 31	₩ 34,105,101	₩ 31,381,788

11. Financial instruments

Details of financial instruments as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Current	Non-current	Current	Non-current
Deposit	₩ 1,481,206	₩ 8,184	₩ 794,170	₩ 670,677

12. Inventories

Details of inventories as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Acquisition cost	Government grants	Valuation allowance	Book value
Stock	₩ 135,635,597	₩ -	₩ (27,782,284)	₩ 107,853,313

	2014			
	Acquisition cost	Government grants	Valuation allowance	Book value
Stock	₩ 95,367,081	₩ -	₩ (4,072,558)	₩ 91,294,523

Reversal of valuation allowance amounting to ₩22,629,800 thousands was credited to cost of sales for the year ended December 31, 2015.

13. Non-financial assets

Details of non-financial assets as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Current	Non-current	Current	Non-current
Advance payments	₩ 458,191	₩ -	₩ 576,321	₩ -
Prepaid expenses	12,908,968	-	16,876,265	-
Minerals held in reserve	-	215,817,404	-	181,630,224
Others	-	2,336,669	57,304	2,391,545
	₩ 13,367,159	₩ 218,154,073	₩ 17,509,890	₩ 184,021,769

14. Investments in associates

(1) Details of investments in associates as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015				
	Major operating activities	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Korea Alumina (*1)	Mining	South Korea	-	₩ -	₩ -
GMC (*2)	Mining	South Korea	45.04	3,206,312	-
Jungchon Natural Graphite Cooperation	Mining	North Korea	50.00	6,034,006	5,978,435
YoungWoo Resources Corporation Ltd.	Mining	South Korea	43.53	3,700,000	2,487,379
Enerchem	Mining	South Korea	42.50	17,000,000	9,045,116
Xian Maxun KORES New Material Corporation Ltd.	Mining	China	49.00	6,638,418	9,965,531
ZhangjiagangWonjin-KORES Industrial Material Corporation Ltd.	Mining	China	49.00	6,401,845	5,058,946
ZhangjiagangWonjin-KORES Resources Recovery Reutilization Corporation Ltd.	Mining	China	49.00	7,531,915	7,032,690
Zhangjiagang Anhuisunglayong	Mining	China	25.00	801,510	659,741
AnhuishengWonjinJinyuan Calcium Industry Corporation Ltd.	Mining	China	49.02	1,259,109	1,433,113
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	Mining	China	48.33	16,144,378	-
AMSA/DMSA (Ambatovy) (*3)	Mining	Madagascar	22.50	1,210,119,469	360,705,737
Korean Boleo corp.	Mining	Mexico	46.92	50,050,214	67,077,276
United Copper & Moly LLC	Mining	U.S.A	50.00	39,524,928	39,258,638
Saldevida Korea	Mining	South Korea	33.33	6,300,000	-
Philco Resources Ltd.	Mining	Malaysia	40.00	325,935	339,697
K.K Lao Mining Co.	Mining	Laos	50.00	763,454	235,887
Haein Resource Corporation	Mining	South Korea	49.00	3,087,000	-
KPMC	Mining	Panama	50.00	265,166,698	223,270,163
Capstone (*2)	Mining	Canada	10.58	196,073,144	96,020,283
KCMC (Acquisition co.) (*2)	Mining	Canada	30.00	232,429,149	197,504,828
Springvale SK Kores Pty Ltd.	Mining	Australia	50.00	48,641,284	105,916,173
PT. DDS	Mining	Indonesia	-	-	-
Mkuze	Mining	Tanzania	28.00	2,260,745	-
PT. KCT (*3)	Mining	Indonesia	24.00	473,949	-
				₩ 2,123,933,462	₩ 1,131,989,633
Government grants					(51,208,357)
					₩ 1,080,781,276

(*1) It was reclassified as assets held-for-sale during the current reporting period (See Note 49).
(*2) an impairment loss ₩94,884,246 thousand of on equity investment in an associate was recognized on the investment during the current reporting period.
(*3) Loans of ₩382,109,400 thousand were converted into equity.

14. Investments in associates (cont'd)

	2014				
	Major operating activities	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Korea Alumina	Mining	South Korea	49.00	₩ 14,342,841	₩ 10,718,077
GMC	Mining	South Korea	45.04	3,111,712	920,566
Jungchon Natural Graphite Cooperation	Mining	North Korea	50.00	6,034,006	5,978,435
YoungWoo Resources Corporation Ltd.	Mining	South Korea	43.53	3,700,000	3,139,348
Enerchem	Mining	South Korea	42.50	17,000,000	14,525,685
Xian Maxun KORES New Material Corporation Ltd.	Mining	China	49.00	6,638,418	10,870,875
ZhangjiagangWonjin-KORES Industrial Material Corporation Ltd.	Mining	China	49.00	6,401,845	5,173,004
ZhangjiagangWonjin-KORES Resources Recovery Reutilization Corporation Ltd.	Mining	China	49.00	7,531,915	8,248,779
Zhangjiagang Anhuisunglayong	Mining	China	25.00	801,510	731,003
AnhuishengWonjinJinyuan Calcium Industry Corporation Ltd.	Mining	China	49.02	1,259,109	1,982,982
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	Mining	China	48.33	4,730,276	-
AMSA/DMSA (Ambatovy)	Mining	Madagascar	22.50	828,010,069	679,543,852
Korean Boleo corp.	Mining	Mexico	46.92	50,050,214	87,558,812
United Copper & Moly LLC	Mining	U.S.A	50.00	39,513,161	37,996,597
Saldevida Korea	Mining	South Korea	33.33	6,300,000	-
Philco Resources Ltd.	Mining	Malaysia	40.00	325,935	325,088
K.K Lao Mining Co.	Mining	Laos	50.00	730,220	253,353
Haein Resource Corporation	Mining	South Korea	49.00	3,087,000	-
KPMC	Mining	Panama	50.00	265,144,410	209,540,022
Capstone	Mining	Canada	10.58	196,073,144	184,887,234
KCMC (Acquisition co.)	Mining	Canada	30.00	232,429,149	311,549,150
Springvale SK Kores Pty Ltd.	Mining	Australia	50.00	48,641,284	126,581,921
PT. DDS	Mining	Indonesia	29.25	25,011,205	24,571,124
Mkuze	Mining	Tanzania	28.00	2,260,745	-
PT. KCT	Mining	Indonesia	24.00	473,949	459,033
				₩ 1,769,602,117	₩ 1,725,554,940
Government grants					(86,605,881)
					₩ 1,638,949,059

14. Investment in associates (cont'd)

(2) Changes in investment in associates for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015							
	January 1	Additions (Disposal)	Dividends received	Loss on valuation	Share of profit (loss)	Changes in equity adjustments in equity method	Others	December 31.
Korea Alumina	₩ 10,718,077	₩ -	₩ -	₩ -	₩ (369,386)	₩ -	₩ (10,348,691)	₩ -
GMC	920,566	94,600	-	(591,733)	(423,433)	-	-	-
Jungchon Natural Graphite Cooperation(*1)	5,978,435	-	-	-	-	-	-	5,978,435
YoungWoo Resources Corporation Ltd.	3,139,348	-	-	-	(651,969)	-	-	2,487,379
Enerchem	14,525,685	-	-	-	(5,480,570)	-	-	9,045,116
Xian Maxun KORES New Material Corporation Ltd.	10,870,875	-	-	-	(903,679)	108,325	(109,990)	9,965,531
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	5,173,004	-	(289,352)	-	119,642	55,651	-	5,058,946
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	8,248,779	-	(1,013,414)	-	(324,720)	122,044	-	7,032,690
Zhangjiagang Anhuisung-layong	731,003	-	-	-	(78,605)	7,342	-	659 741
Anhuisheng Wonjin Jinyuan Calcium Industry Corporation Ltd.	1,982,982	-	(341,826)	-	146,717	(354,760)	-	1,433,113
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	-	11,414,102	-	-	(11,414,102)	-	-	-
AMSA/DMSA (Ambatovy)	679,543,852	382,109,400	-	-	(709,348,029)	43,663,613	(35,263,099)	360,705,737
Korean Boleo corp.	87,558,812	-	-	-	(34,345,246)	13,863,710	-	67,077,276
United Copper & Moly LLC	37,996,597	11,767	-	-	(1,222,389)	2,472,663	-	39,258,638
Saldebida Korea	-	-	-	-	-	-	-	-
Philco Resources Ltd.	325,088	-	-	-	(6,682)	21,291	-	339,697
K.K.LaoMining Co.	253,353	33,234	-	-	(42,571)	16,307	(24,436)	235,887
Haein Resource Corporation	-	-	-	-	-	-	-	-
KPMC	209,540,022	22,287	-	-	80,473	13,627,381	-	223,270,163
Capstone	184,887,234	-	-	(19,082,708)	(76,145,537)	(2,388,863)	8,750,157	96,020,283
KCMC (Acqusition Co.)	311,549,150	-	-	(74,737,288)	(55,662,519)	376,722	15,978,764	197,504,828
Springvale SK Kores Pty Ltd	126,581,921	-	-	-	(14,137,136)	-	(6,528,612)	105,916,173
PT. DDS	24,571,124	(12,644,974)	-	-	(2,973)	-	(11,923,175)	-
Mukuze	-	-	-	-	-	-	-	-
PT. KCT	459,033	-	-	(472,517)	-	-	13,485	-
	₩ 1,725,554,940	₩ 381,040,416	₩ (1,644,592)	₩ (94,884,246)	₩(910,212,714)	₩ 71,591,426	₩ (39,455,597)	₩ 1,131,989,633

(*1) As the chandge in equity interest was not significant, gain or loss on valuation of investments under the equity method was not recognized.

14. Investments in associates (cont'd)

	2014							
	January 1	Additions	Dividends received	Loss on valuation	Share of profit (loss)	Changes in equity adjustments in equity method	Others	December 31
Korea Alumina	₩ 12,159,836	₩ -	₩ -	₩ -	₩ (1,441,760)	₩ -	₩ -	₩ 10,718,076
GMC	1,175,261	-	-	-	(254,695)	-	-	920,566
Jungchon Natural Graphite Cooperation (*1)	5,978,435	-	-	-	-	-	-	5,978,435
YoungWoo Resources Corporation Ltd.	3,747,451	-	-	-	(608,103)	-	-	3,139,348
Enerchem	16,155,105	-	-	-	(1,629,420)	-	-	14,525,685
Xian Maxun KORES New Material Corporation Ltd.	11,685,965	-	-	-	(868,556)	149,404	(95,938)	10,870,875
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	5,129,403	-	(395,529)	-	347,048	92,082	-	5,173,004
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	8,137,325	-	(1,258,019)	-	1,212,896	156,577	-	8,248,779
Zhangjiagang Anhuisung-layong	871,338	-	(230,478)	-	73,067	17,076	-	731,003
Anhuisheng Wonjin Jinyuan Calcium Industry Corporation Ltd.	1,652,996	-	(43,583)	-	383,816	(10,247)	-	1,982,982
AMSA/DMSA (Ambatovy)	775,296,191	-	-	-	(113,201,338)	26,897,495	(9,448,496)	679,543,852
Korean Boleo corp.	60,436,722	102,837	-	-	385,725	33,575,988	(6,942,460)	87,558,812
United Copper & Moly LLC	36,860,071	16,184	-	-	(396,385)	1,516,727	-	37,996,597
Saldebida Korea	5,678,661	-	-	-	(5,678,661)	-	-	-
Philco Resources Ltd.	9,395,286	-	(11,026,435)	-	2,149,408	(193,171)	-	325,088
K.K.LaoMining Co.	398,715	331,505	-	-	(280,747)	(3,433)	(192,687)	253,353
KPMC	249,916,823	218,585	-	-	105,239	8,370,825	(49,071,450)	209,540,022
Capstone	188,771,934	-	-	-	(7,221,131)	(4,025,410)	7,361,841	184,887,234
KCMC (Acqusition co.)	288,992,794	-	-	-	(854,457)	10,948,187	12,462,626	311,549,150
Springvale SK Kores Pty Ltd	132,833,123	-	-	-	(502,108)	-	(5,749,094)	126,581,921
PT. DDS	24,404,229	-	-	-	(693,500)	(116,787)	977,183	24,571,125
Mukuze	2,160,185	19,212	-	(2,175,140)	-	-	(4,257)	-
PT. KCT	-	473,949	-	-	(34,118)	-	19,202	459,033
	₩ 1,841,837,849	₩ 1,162,272	₩ (12,954,044)	₩ (2,175,140)	₩ (129,007,780)	₩ 77,375,313	₩ (50,683,530)	₩ 1,725,554,940

(*1) As the change in equity interest was not significant, gain or loss on valuation of investments under the equity method was not recognized.

14. Investment in associates (cont'd)

The summary of financial information of the Group's associates as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Total assets	Total liabilities	Revenue	Profit (loss) for the year
GMC	₩ 338,129	₩ 2,194	₩ -	₩ (940,289)
YoungWoo Resources Corporation Ltd.	14,192,051	8,477,878	6,389,535	(1,466,495)
Enerchem	39,216,129	19,073,690	-	(12,505,288)
Xian Maxun KORES New Material Corporation Ltd.	28,593,399	8,255,580	2,562,980	(2,068,711)
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	16,323,757	5,999,377	21,241,663	200,963
Zhangjiagang Wonjin-KORES Resources Recovery Reutilization Corporation Ltd.	19,728,935	5,376,506	18,330,445	(1,193,565)
Zhangjiagang Anhuisunglayong	3,425,167	786,205	3,773,263	(314,421)
Anhuisheng WonjinJinyuan Calcium Industry Corporation Ltd.	9,186,120	6,262,592	6,691,852	299,301
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	28,785,163	64,109,378	10,726,479	(38,207,604)
AMSA/DMSA(Ambatovy)	6,415,380,328	4,812,243,720	737,728,086	(3,309,343,481)
Korean Boleo corp on S.A. de C.V.	408,635,102	32,959,215	-	(73,199,587)
United Copper & Moly LLC	78,521,494	4,219	-	(2,444,778)
Saldebida Korea	231,292	6,210	-	(11,822)
Philco Resources Ltd.	31,182,166	30,332,924	-	(16,706)
K.K. Lao Mining Co.	471,775	-	-	(134,013)
Haein Resource Corporation	4,269,736	20,061,126	461,190	(2,070,532)
KPMC	903,603,910	457,063,584	-	(339,935)
Capstone	1,890,716,108	684,642,552	529,441,143	(302,034,283)
KCMC	690,492,004	14,428,492	-	(185,541,730)
Springvale SK Kores Pty Ltd.	393,931,034	182,098,688	106,940,671	(28,142,051)
Mukuze	29,813	8,790	-	(16,371)
PT. KCT	1,458,935	57,973	-	(23,619)
	₩ 10,978,712,547	₩ 6,352,250,893	₩ 1,444,287,307	₩ (3,959,515,017)

14. Investment in associates (cont'd)

	2014			
	Total assets	Total liabilities	Revenue	Profit (loss) for the year
Korea Alumina	₩ 43,094,490	₩ 21,347,093	₩ 26,297,203	₩ 121,109
GMC	1,129,818	8,161	-	(495,772)
YoungWoo Resources Corporation Ltd.	15,534,089	8,322,170	6,682,231	(1,379,004)
Enerchem	48,586,972	15,549,075	-	(3,713,450)
Xian Maxun KORES New Material Corporation Ltd.	31,136,746	8,951,288	5,431,536	(1,968,356)
Zhangjiagang Wonjin-KORES Industrial Material Corporation Ltd.	15,551,449	4,994,297	21,967,532	708,345
ZhangjiagangWonjin-KORES Resources Recovery Reutilization Corporation Ltd.	23,931,011	7,096,767	22,321,186	1,873,218
Zhangjiagang Anhuisunglayong	3,949,117	1,025,103	4,197,471	309,623
Anhuisheng WonjinJinyuan Calcium Industry Corporation Ltd.	4,767,888	722,636	6,459,790	782,979
POSCO KORES Yongxin Rare Earth Metal Corporation Ltd.	75,996,783	96,264,092	34,564,693	(9,907,360)
AMSA/DMSA (Ambatovy)	8,938,860,379	5,918,665,483	726,228,250	(545,107,703)
Korean Boleo corp on S.A. de C.V.	423,407,082	4,079,157	-	887,993
United Copper & Moly LLC	75,993,194	-	-	(792,770)
Saldebida Korea	242,146	5,242	-	(15,117)
Philco Resources Ltd.	29,256,520	28,443,801	5,381,467	5,373,519
K.K. Lao Mining Co.	506,706	-	-	(946,868)
Haein Resource Corporation	5,637,432	19,358,289	904,024	(2,885,466)
KPMC	682,629,821	263,549,777	-	(469,609)
Capstone	2,081,976,034	639,557,429	543,943,895	(9,339,955)
KCMC	822,590,717	9,494,890	-	(2,858,439)
Springvale SK Kores Pty Ltd.	417,421,719	164,257,876	182,047,638	(765,533)
PT. DDS	12,708,249	9,193,055	-	(938,026)
Mukuze	41,666	6,045	-	(2,190,706)
PT. KCT	1,603,193	123,190	-	(142,535)
	₩ 13,756,553,221	₩ 7,221,014,916	₩ 1,586,426,916	₩ (573,859,883)

15. Investments in joint ventures

Details of investments in joint ventures as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015				
	Major operating activities	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Minerva (*1)	Mining	Australia	4.00	₩ 8,559,592	₩ 757,826
Moolarben	Mining	Australia	4.00	66,051,424	26,330,091
Athena	Mining	Australia	4.00	1,755,168	264,771
White Cliff Nickel	Mining	Australia	25.00	1,914,917	-
Marree	Mining	Australia	18.72	1,281,070	749,190
Boulia	Mining	Australia	33.33	1,944,836	-
Narrabri	Mining	Australia	2.50	63,496,715	19,572,304
Togara North	Mining	Australia	8.33	1,778,017	-
KLS	Mining	Peru	50.00	43,516,523	46,567,876
Cree East	Mining	Canada	12.50	10,166,743	32,613
Ultimatum Challenge Trading 36 (Pty) Ltd.	Mining	South Africa	37.00	13,570,934	-
				₩ 214,035,939	₩ 94,274,671
Government grants					(34,889,005)
					₩ 59,385,666

(*1) an impairment loss on equity investment in a joint venture ₩2,771,290 thousand of was recognized during the current reporting period.

	2014				
	Major operating activities	Country of incorporation	Equity interest (%)	Acquisition cost	Book value
Minerva	Mining	Australia	4.00	₩ 8,138,328	₩ 3,284,807
Moolarben	Mining	Australia	4.00	60,474,028	21,849,118
Athena	Mining	Australia	4.00	1,751,344	274,999
White Cliff Nickel	Mining	Australia	25.00	1,914,917	-
Marree	Mining	Australia	25.00	1,281,070	800,301
Boulia	Mining	Australia	33.33	1,944,836	-
Narrabri	Mining	Australia	2.50	63,126,480	20,235,756
Togara North	Mining	Australia	8.33	1,778,017	11,863
KLS	Mining	Peru	50.00	39,388,017	41,830,984
Cree East	Mining	Canada	12.50	10,166,743	35,513
Ultimatum Challenge Trading 36 (Pty) Ltd.	Mining	South Africa	37.00	13,570,934	-
				₩ 203,534,714	₩ 88,323,341
Government grants					(34,889,005)
					₩ 53,434,336

16. Property, plant and equipment

Details of property, plant and equipment as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

2015	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment losses	Book value
Land	₩ 35,102,688	₩ (538,935)	₩ -	₩ (1,136,736)	₩ 33,427,017
Buildings	129,059,139	(358,496)	(10,505,611)	-	118,195,032
Structures	1,337,396	(1)	(462,722)	-	874,673
Machinery	123,894,708	(676,187)	(85,287,343)	-	37,931,178
Vehicles	2,206,470	(9,030)	(1,239,794)	-	957,646
Construction in progress	2,218,825,886	(2,904,641)	-	(978,836,632)	1,237,084,614
Others	17,929,583	(24,471)	(4,553,668)	-	13,351,444
	₩ 2,528,355,870	₩ (4,511,761)	₩ (102,049,138)	₩ (979,973,368)	₩ 1,441,821,604

2014	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment losses	Book value
Land	₩ 57,793,245	₩ (538,935)	₩ -	₩ (1,198,017)	₩ 56,056,293
Buildings	56,128,054	(380,347)	(8,744,447)	-	47,003,260
Structures	1,610,462	(1)	(589,804)	-	1,020,657
Machinery	200,567,608	(812,401)	(59,442,908)	-	140,312,299
Vehicles	2,211,399	(37,815)	(1,271,717)	-	901,867
Construction in progress	1,841,859,092	-	-	-	1,841,859,092
Others	9,431,862	(29,455)	(4,956,669)	-	4,445,738
	₩ 2,169,601,722	₩ (1,798,954)	₩ (75,005,545)	₩ (1,198,017)	₩ 2,091,599,206

Changes in property, plant and equipment for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

2015	January 1	Acquisition/ additions	Disposals	Depreciation	impairment	Others	December 31
Land	₩ 56,595,228	₩ 282,388	₩ (22,213,425)	₩ -	₩ -	₩ (698,239)	₩ 33,965,952
Government grants	(538,935)	-	-	-	-	-	(538,935)
Buildings	47,383,608	40,051,012	(1,693,325)	(3,043,608)	-	35,855,841	118,553,528
Government grants	(380,348)	-	-	21,852	-	-	(358,496)
Structures	1,020,657	124,979	(297,542)	(69,071)	-	95,651	874,674
Government grants	(1)	-	-	-	-	-	(1)
Machinery	141,124,700	2,057,931	(128,770)	(23,530,192)	-	(80,916,304)	38,607,365
Government grants	(812,401)	(8,340)	183	144,371	-	-	(676,187)
Vehicles	939,682	312,827	(9,828)	(274,758)	-	(1,247)	966,676
Government grants	(37,815)	(1,000)	-	29,785	-	-	(9,030)
Construction in progress	1,841,859,092	168,102,331	-	-	(941,535,247)	171,563,079	1,239,989,255
Government grants	-	(2,904,641)	-	-	-	-	(2,904,641)
Others	4,475,194	10,478,922	(651,887)	(1,328,380)	-	402,066	13,375,915
Government grants	(29,454)	(420)	127	5,276	-	-	(24,471)
	₩ 2,091,599,207	₩ 218,495,989	₩ (24,994,467)	₩ (28,044,725)	₩ (941,535,247)	₩ 126,300,847	₩ 1,441,821,604

16. Property, plant and equipment (cont'd)

	2014					
	January 1	Acquisition/ additions	Disposals	Depreciation	Others	December 31
Land	₩ 40,562,578	₩ -	₩ -	₩ -	₩ 16,032,650	₩ 56,595,228
Government grants	(538,935)	-	-	-	-	(538,935)
Buildings	47,478,051	297,310	-	(2,077,547)	1,685,794	47,383,608
Government grants	(402,199)	-	-	21,851	-	(380,348)
Structures	791,846	288,905	-	(60,093)	-	1,020,658
Government grants	(1)	-	-	-	-	(1)
Machinery	50,834,236	102,008,386	(1,574)	(17,120,269)	5,403,921	141,124,700
Government grants	(959,338)	-	-	146,937	-	(812,401)
Vehicles	932,821	319,191	(9,578)	(299,851)	(2,901)	939,682
Government grants	(70,056)	-	-	32,241	-	(37,815)
Construction in progress	1,576,868,679	218,940,854	-	-	46,049,559	1,841,859,092
Others	4,715,478	835,259	(3,536)	(1,073,442)	1,433	4,475,192
Government grants	(6,731)	(26,509)	186	3,600	-	(29,454)
	₩ 1,720,206,429	₩ 322,663,396	₩ (14,502)	₩ (20,426,573)	₩ 69,170,456	₩ 2,091,599,206

Insured assets

Details of assets insured for the year ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		
Insurance	Company	Insured amounts	Insurance period
Comprehensive insurance	Heungkuk Fire&Marine Insurance Co., Ltd.	₩ 228,216,676	2015.07.29 ~ 2016.07.29
Directors & officers liability insurance	Hanwah Life insurance Co., Ltd.	10,000,000	2015.02.14 ~ 2016.02.13
Fire insurance	KB Insurance Corporation Ltd.	83,400,000	2015.06.24 ~ 2016.06.24
Gas accident liability insurance	Dongbu Insurance Corporation Ltd.	2,000,000	2015.04.14 ~ 2016.04.14
Others	Others	1,100,000	2013.12.27 ~ 2023.12.26
		₩ 324,716,676	

	2014		
Insurance	Company	Insured amounts	Insurance period
Comprehensive insurance	The-K Non-life Insurance Co., Ltd	₩ 172,400,000	2014-07-29 ~ 2015-07-29
Directors & officers liability insurance	ACE American Insurance Company	10,000,000	2014-02-14 ~ 2015-02-14
	LIG Insurance Corporation Ltd.	13,100,000	2014-03-06 ~ 2015-03-06
Fire insurance	Dongbu Insurance Corporation Ltd.	2,300,000	2014-02-04 ~ 2015-02-04
	Dongbu Insurance Corporation Ltd.	450,000	2014-06-10 ~ 2015-06-10
Gas accident liability insurance	Dongbu Insurance Corporation Ltd.	500,000	2014-12-05 ~ 2015-12-05
Others	Others	700,000	2013-12-27 ~ 2023-12-26
		₩ 199,450,000	

17. Investment properties

Details of investment properties for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Acquisition cost	Book value	Acquisition cost	Book value
Land	₩ 2,201,757	₩ 2,201,757	₩ 2,320,452	₩ 2,320,452

17. Investment properties (cont'd)

Changes in investment properties for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			2014		
	Acquisition cost	Net amount of decrease	Book value	Acquisition cost	Net amount of decrease	Book value
Land	₩ 2,320,452	₩ (118,695)	₩ 2,201,757	₩ 2,425,933	₩ (105,481)	₩ 2,320,452

Details of rental income from investment properties for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Rental income	₩ 79,364	₩ 82,668

18. Goodwill

Details of goodwill as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Acquisition cost	₩ 19,770,334	₩ 19,770,334
Accumulated impairment losses	(17,068,724)	(17,068,724)
Book value	₩ 2,701,610	₩ 2,701,610

Changes in the book value of goodwill for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Balance as at January 1	₩ 2,701,610	₩ 12,617,691
Additions	-	(9,916,081)
Balance as at December 31	₩ 2,701,610	₩ 2,701,610

Changes in accumulated impairment losses of goodwill for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Balance as at January 1	₩ 17,068,724	₩ 7,152,643
Additions	-	9,916,081
Balance as at December 31	₩ 17,068,724	₩ 17,068,724

19. Other intangible assets

Details of other intangible assets as at December, 2015 and 2014 are as follows (Korean won in thousands):

	2015				
	Acquisition cost	Government grants	Accumulated amortization	Accumulated impairment losses	Book value
Exploration and evaluation assets	₩ 48,645,422	₩ (15,481,261)	₩ -	₩ (12,592,928)	₩ 20,571,233
Software	13,995,013	-	(5,244,915)	-	8,750,098
Industrial property rights	6,546	-	(6,546)	-	-
Mining rights	2,017	-	-	-	2,017
Others	73,821,914	-	(7,321,180)	(23,210,480)	43,290,254
	₩ 136,470,912	₩ (15,481,261)	₩ (12,572,641)	₩ (35,803,408)	₩ 72,613,602

	2014				
	Acquisition cost	Government grants	Accumulated amortization	Accumulated impairment losses	Book value
Exploration and evaluation assets	₩ 46,121,623	₩ (15,276,281)	₩ -	₩ (2,606,101)	₩ 28,239,241
Software	11,646,490	-	(5,662,196)	-	5,984,294
Industrial property rights	6,546	-	(6,546)	-	-
Mining rights	2,017	-	-	-	2,017
Others	77,545,727	-	(4,924,431)	-	72,621,296
	₩ 135,322,403	₩ (15,276,281)	₩ (10,593,173)	₩ (2,606,101)	₩ 106,846,848

Changes in other intangible assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015						
	January 1	Acquisition/ additions	Disposal	Amortization	Impairment	Others	December 31
Exploration and evaluation assets	₩ 43,515,522	₩ 3,649,741	₩ -	₩ -	₩ (9,641,633)	₩ (1,471,136)	₩ 36,052,494
Government grants	(15,276,281)	(204,980)	-	-	-	-	(15,481,261)
Software	5,984,294	3,984,591	(129,065)	(1,089,722)	-	-	8,750,098
Industrial property rights	-	-	-	-	-	-	-
Mining rights	2,017	-	-	-	-	-	2,017
Others	72,621,296	-	-	(2,396,749)	(23,122,601)	(3,811,692)	43,290,254
	₩ 106,846,848	₩ 7,429,353	₩ (129,065)	₩ (3,486,471)	₩ (32,764,234)	₩ (5,282,828)	₩ 72,613,602

	2014				
	January 1	Acquisition/ additions	Amortization	Others	December 31
Exploration and evaluation assets	₩ 30,629,790	₩ 2,349,013	₩ -	₩ 10,536,719	₩ 43,515,522
Government grants	(15,276,281)	-	-	-	(15,276,281)
Software	5,602,483	1,280,158	(898,347)	-	5,984,294
Industrial property rights	3,928	-	(3,928)	-	-
Mining rights	2,017	-	-	-	2,017
Others	76,624,233	135,563	(2,334,768)	(1,803,732)	72,621,296
	₩ 97,586,170	₩ 3,764,734	₩ (3,237,043)	₩ 8,732,987	₩ 106,846,848

20. Financial liabilities

Details of financial liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Current	Non-current	Current	Non-current
Short-term borrowings	₩ 385,015,200	₩ -	₩ 370,000,000	₩ -
Long-term borrowings	61,473,158	645,933,565	461,237,510	224,230,317
Borrowings from Special Account for Energy and Resources, net (*1)	-	15,493,787	-	17,344,269
Bonds	539,081,961	2,585,115,827	549,397,811	2,008,997,897
Derivative liabilities	-	14,857,193	-	5,951,618
Others	-	67,558,290	-	123,430,219
	₩ 985,570,319	₩ 3,328,958,662	₩ 1,380,635,321	₩ 2,379,954,320

(*1) Borrowings from Special Account for Energy and Resources are net amount of loans and borrowings.

21. Trade and other payables

Details of trade and other payable as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Trade payables	₩ 1,272,750	₩ 30,380
Other payables	52,401,480	98,362,874
Accrued expenses	19,160,381	13,251,032
	₩ 72,834,611	₩ 111,644,286

22. Borrowings and bonds payable

Details of borrowings and bonds payable as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Current liabilities:		
Short-term borrowings	₩ 385,015,200	₩ 370,000,000
Current portion of long-term borrowings	61,473,158	461,237,510
Current portion of bonds payable	539,120,000	549,600,000
Less : present value discount	(38,039)	(202,189)
	985,570,319	1,380,635,321
Non-current liabilities:		
Long-term borrowings (*1)	645,933,565	224,230,317
Bonds payable	2,599,169,000	2,020,163,680
Less : present value discount	(14,053,173)	(11,165,783)
	3,231,049,392	2,233,228,214
	₩ 4,216,619,711	₩ 3,613,863,535

(*1) Long-term borrowings exclude borrowings from the Special Account for Energy and Resources.

22. Borrowings and bonds payable (cont'd)

Details of short-term borrowings as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	Financial institution	Annual interest rate	Maturity	2015	2014
Commercial paper	KTB Investment & Securities Co., Ltd. and 2 other banks	-	-	₩ -	₩ 90,000,000
	KTB Investment & Securities Co., Ltd. and 2 other banks	-	-	-	150,000,000
	KTB Investment & Securities Co., Ltd. and 2 other banks	-	-	-	130,000,000
Short-term borrowing	CitiBank	AAA Finance Bond (1 Year) +0.35%	2016-04-06	100,000,000	-
	Woori Bank	CD+0.96%	2016-05-03	150,000,000	-
	Kookmin Bank	MOR+1.01%	2016-05-10	120,000,000	-
	HSBC	0.27%	2016-04-09	11,602,800	-
	Woori Bank	3.59%	2016-03-04	3,412,400	-
				₩ 385,015,200	₩ 370,000,000

Details of long-term borrowings as at December 31, 2015 and 2014 are as follows (Foreign currency in units and Korean won in thousands):

				2015		2014	
	Financial institution	Annual interest rate	Maturity	Foreign currencies	Korean won Equivalent	Foreign currencies	Korean won Equivalent
Long-term borrowings in KRW	Ministry of Unification	2.00%	2026-06-18	-	₩ 6,034,000	-	₩ 6,034,000
Long-term borrowings in foreign currency	US-EXIM	3.02%	2022-12-18	USD 110,579,852	129,599,586	USD 126,376,974	138,913,569
	US-EXIM	2.12%	2022-12-18	USD 256,580,648	300,712,519	USD 293,235,026	322,323,941
	HSBC	Libor(3M) +0.60%	2017-09-04	USD 77,000,000	90,244,000	USD 77,000,000	84,638,400
	Baha Funding Loan	Libor(3M) +3.50%	2020-09-07	USD 39,622,674	46,437,774	USD 38,147,621	41,931,865
	Equity loan	10%	2020-09-07	USD 28,781,233	33,731,605	USD 9,960,172	10,948,221
	Equity loan	4%	2018-12-31	USD 85,876,484	100,647,239	USD 73,396,862	80,677,831
				USD 598,440,891	707,406,723	USD 618,116,655	685,467,827
Less : current portion					(61,473,158)		(461,237,510)
					₩ 645,933,565		₩ 224,230,317

22. Borrowings and bonds payble (cont'd)

Details of bonds payable as at December 31, 2015 and 2014 are as follows (Foreign currency in unit and Korean won in thousands):

			2015			2014		
	Annual interest rate	Maturity	Foreign currencies		Korean won Equivalent	Foreign currencies		Korean won Equivalent
4th Korea Resources Corporation Bonds	4.43%	2021-05-26		-	₩ 200,000,000		-	₩ 200,000,000
5th Korea Resources Corporation Bonds	-	-		-	-	USD	200,000,000	219,840,000
7th-1 Korea Resources Corporation Bonds	3.54%	2018-11-13		-	100,000,000		-	100,000,000
7th-2 Korea Resources Corporation Bonds	3.80%	2023-11-13		-	100,000,000		-	100,000,000
8th Korea Resources Corporation Bonds	Libor (3M)+1.05%	2016-11-26	USD	260,000,000	304,720,000	USD	260,000,000	285,792,000
Global Bonds	2.88%	2019-05-07	USD	120,000,000	140,640,000		-	-
Global Bonds	2.25%	2020-04-29	USD	350,000,000	410,200,000		-	-
9th-1 Korea Resources Corporation Bonds	3.34%	2019-04-15		-	110,000,000		-	110,000,000
9th-2 Korea Resources Corporation Bonds	3.67%	2024-04-15		-	100,000,000		-	100,000,000
Global Bonds (*1)	2.88%	2019-05-07	USD	340,000,000	398,480,000	USD	340,000,000-	373,728,000
Global Bonds (*1)	0.75%	2019-11-12	CHF	100,000,000	85,310,000	CHF	100,000,000-	111,140,112
Global Bonds (*1)	4.13%	2019-12-03	AUD	100,000,000	118,539,000	AUD	100,000,000	89,903,568
Global Bonds	-	-		-	-	USD	300,000,000	329,760,000
Global Bonds	2.13%	2018-05-02	USD	500,000,000	586,000,000	USD	500,000,000	549,600,000
11th-1 Korea Resources Corporation Bonds	2.31%	2020-07-10		-	140,000,000		-	-
11th-2 Korea Resources Corporation Bonds	2.81%	2030-07-10		-	110,000,000		-	-
12th Korea Resources Corporation Bonds	Libor (3M)+0.70%	2016-10-16	USD	200,000,000	234,400,000		-	-
			USD CHF AUD	1,770,000,000 100,000,000 100,000,000	3,138,289,000	USD CHF AUD	1,260,000,000 100,000,000 100,000,000	2,569,763,680
Less bond discount					(14,091,212)			(11,367,972)
Less current portion					(539,081,961)			(549,397,811)
					₩ 2,585,115,827			₩ 2,008,997,897

(*1) The Company provided payment guarantee for the above loans payable of MMB (See Note 45).

23. Borrowings and loans from Special Account for Energy and Resources

The Company provides loan services, delegated by the Ministry of Trade, Industry and Energy(MTIE) to certain companies engaged in the development of the energy and resource business in accordance with the Act on Special Account for the Energy and Resource.

The Company offsets loans and borrowings from Special Account for Energy and Resources in accordance with the Pronouncement 2012-334 ('Special Account for Energy and Resources Operation Method'), Article 14 which indicates that the Company is not obligated to make decisions regarding loans and borrowings issued.

Loans are given to the companies who are engaged in the energy and resources sector for the promotion of the government's energy supply, energy price stability and natural resources policies.

Business	Repayment conditions
Overseas mineral resources development	General
Overseas resources survey (exploration)	Successful effort method

With recommendations by the audit agency (Overseas Resource Development Association) and approval by the Ministry of Trade, Industry and Energy, the Company received loans from the Special account for Energy and Resources and provided the loans to the end users.

The Company is in compliance with the rules of the MTIE in relation to loan terms, interest rates, repayment terms and handling fees.

Details of borrowings provided as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015					
	January 1	Borrowings	Repayment	Exemption	Other increases	December 31
Overseas mineral resources development	₩ 347,889,328	₩ -	₩(41,470,781)	₩ -	₩ 6,651,054	₩ 313,069,601
Overseas resources survey (exploration)	72,708,552	2,483,040	-	(4,308,799)	841,638	71,724,431
	₩ 420,597,880	₩ 2,483,040	₩(41,470,781)	₩ (4,308,799)	₩ 7,492,692	₩ 384,794,032

	2014				
	January 1	Borrowings	Repayment	Other increases	December 31
Overseas mineral resources development	₩ 352,262,067	₩ 27,642,000	₩ (36,617,988)	₩ 4,603,248	₩ 347,889,327
Overseas resources survey (exploration)	69,843,244	2,358,000	-	507,309	72,708,553
	₩ 422,105,311	₩ 30,000,000	₩ (36,617,988)	₩ 5,110,557	₩ 420,597,880

23. Borrowings and loans from Special Account for Energy and Resources (cont'd)

Details of loans from the Special Account for Energy and Resource as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015					
	Borrower	January 1	Loans provided (*)	Repayment of loan	Exemption	Other increase	December 31
Overseas mineral resources development	Daewoo International Corporation and others	₩ 347,875,377	₩ -	₩ (41,334,724)	₩ -	₩ 6,661,283	₩ 313,201,936
Overseas resources survey (exploration)	SK Networks Co., Ltd. and others	55,378,235	2,483,040	-	(2,533,190)	770,224	56,098,309
		₩ 403,253,612	₩ 2,483,040	₩ (41,334,724)	₩ (2,533,190)	₩ 7,431,507	₩ 369,300,245

		2014				
	Borrower	January 1	Loans provided (*)	Repayment of loan	Other increase	December 31
Overseas mineral resources development	Daewoo International Corporation and others	₩ 345,981,244	₩ 27,642,000	₩ (30,335,279)	₩ 4,587,412	₩ 347,875,377
Overseas resources survey (exploration)	SK Networks Co., Ltd. and others	52,534,086	2,358,000	-	486,149	55,378,235
		₩ 398,515,330	₩ 30,000,000	₩ (30,335,279)	₩ 5,073,561	₩ 403,253,612

(*) Amounts above exclude inter-group loans.

24. Other financial liabilities

Details of other financial liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Nickel Funds	₩ 67,558,290	₩ 123,430,219

The Group's investment in the Ambatoby nickel mine which is classified as an investment in associates was partly financed with the Nickel Fund. The bondholders are to be paid dividends by the Company based on the mining output and sales thereof over a seven year period upon the commencement of operations of the mine. Consequently, the Grouup recognized ₩67,558,289 thousand (2014: ₩123,430,219 thousand) as consideration for the securitization of debt on sales of nickel prices and exchange rates.

25. Pensions benefits

Defined contribution plans

The Group operates defined contribution plans at the election of employees. A defined contribution is managed separately by the plan's administrator. When employees terminate their employment before the benefits have vested, the Group's obligation to make contributions to the plan decreases on a pro rata basis. Contributions paid by the Group amounted to ₩1,670,418 thousand (2014: ₩1,365,045 thousand) for the year ended December 31, 2015.

25. Pensions benefits (cont'd)

Defined benefit plans

The Group operates a defined benefit plan and the cost of the defined benefit plan is determined by Mirae Asset Securities Co., Ltd., an independent actuary, on February 11, 2016. The present value of the defined benefit obligations, current service costs and past service costs are calculated using the projected unit credit method.

The major components of the defined benefit liability as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
The present value of defined benefit liability under a defined benefit pension plan	₩	9,586,304	₩	7,412,502
Fair value of plan assets		(6,697,147)		(6,488,395)
		2,889,157		924,107
The present value of defined benefit liability not related to the defined benefit pension plan		56,961		138,835
	₩	2,946,118	₩	1,062,942

Changes in defined benefit obligation for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
As at January 1	₩	7,551,337	₩	9,681,267
Current service cost		1,762,536		1,898,004
Interest cost (*1)		253,001		429,218
Re-measurement loss (gain) on obligation		476,818		1,464,763
Benefits paid		(400,426)		(5,921,915)
As at December 31	₩	9,643,265	₩	7,551,337

(*1) Interest cost on defined benefit pension plan is based on the bond yield of corporate bonds issued by a blue chip company that are denominated in the same monetary unit and have a similar maturity on the date of appraisal. The Group referred to the rate of return of corporate bonds (AA+), and actually applied a discount rate of 2.94% with a maturity of 16.24 years to the defined benefit pension plan as at December 31, 2015.

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Changes in the fair value of plan assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
As at January 1	₩	6,488,394	₩	6,378,001
Expected return on plan assets (*1)		200,083		258,511
Re-measurement loss on the plan assets		(77,826)		129,300
Contributions by employer		303,753		18,232
Benefits paid		(217,257)		(295,649)
As at December 31	₩	6,697,147	₩	6,488,395

25. Pensions benefits (cont'd)

(*1) Interest income of plan assets is based on the bond yield of corporate bonds issued by a blue chipcompany that are denominated in the same monetary unit and have a similar maturity on the date ofappraisal. The Group referred to the rate of return of corporate bonds (AA+), and actually applied adiscount rate of 2.94% with a maturity of 16.24 years to the defined benefit pension plan as of December 31, 2015.

Accumulated re-measurement gains and losses on defined benefit plans recognized as other comprehensive income (before consideration of tax effect) amounted to ₩2,675,230 thousand (2014: ₩2,120,585 thousand) for the year ended December 31, 2015.

Details of costs related with the defined benefit plan recognized in statement of comprehensiveincome for the years ended December 31, 2015 and 2014 is as follows (Korean won in thousands):

		2015		2014
Current service costs	₩	1,762,536	₩	1,898,004
Interest costs		253,001		429,218
Expected return on plan assets		(200,083)		(258,511)
	₩	1,815,454	₩	2,068,711

Costs related to the defined benefit plan were recognized as follows (Korean won in thousands):

		2015		2014
Cost of sales	₩	1,361,591	₩	1,667,111
Selling and administrative expenses		453,863		401,600
	₩	1,815,454	₩	2,068,711

Re-measurement loss which are recognized as other comprehensive income are as follows (Korean won in thousands):

		2015		2014
Actuarial loss on defined benefit obligation	₩	(476,818)	₩	(1,464,763)
Difference between expect return on plan assets and actual interest income		(77,826)		129,300
	₩	(554,644)	₩	(1,335,463)

Actuarial valuation losses recognized in 2015 are included in deficit in the consolidated financial statements.

26. Provisions

Details of provision as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Current	Non-current	Current	Non-current
Provisions (*1) for employee benefits	₩ 4,201,002	₩ -	₩ 6,099,549	₩ -
Provisions for restoration (*2)	139,554	42,384,509	130,805	40,981,475
Provisions for litigation (*3)	-	31,154,376	-	30,926,600
Financial guarantee liability (*4)	-	97,467,036	-	-
	₩ 4,340,556	₩ 171,005,921	₩ 6,230,354	₩ 71,908,075

(*1) The Group estimates performance-related bonuses based on business performance and assessment standards and estimation could be changed.

(*2) The Group estimates recovery expenses expected after completion of mining on basis of the best estimation of management. This estimation could be different by the change of recovery expense and inflation rate.

(*3) The provision is based on the expected loss arising from the first trial (see Note 47).

(*4) The above provision is the present value of a difference between a payment made by the Company and an estimated recoverable amount under rights of subrogation.

(2) Changes in provisions for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015					
	January 1	Incurred	Utilized	Reversed	Others	December 31
Provision for employee benefits	₩ 6,099,549	₩ 4,201,002	₩ (3,918,181)	₩ (2,181,368)	₩ -	₩ 4,201,002
Provision for restoration	41,112,279	-	-	(1,265,765)	2,677,549	42,524,063
Provision for litigation	30,926,600	227,776	-	-	-	31,154,376
Financial guarantee liability	-	97,467,036	-	-	-	97,467,036
	₩ 78,138,428	₩ 101,895,814	₩ (3,918,181)	₩ (3,447,133)	₩ 2,677,549	₩ 175,346,477

	2014					
	January 1	Incurred	Utilized	Reversed	Others	December 31
Provision for employee benefits	₩ 5,613,594	₩ 6,099,549	₩ (4,322,520)	₩ (1,291,074)	₩ -	₩ 6,099,549
Provision for restoration	31,003,382	8,449,824	-	-	1,659,074	41,112,280
Provision for litigation	-	30,926,600	-	-	-	30,926,600
	₩ 36,616,976	₩ 45,475,973	₩ (4,322,520)	₩ (1,291,074)	₩ 1,659,074	₩ 78,138,429

27. Government grants

Accounting policy Government grants are presented in the way of deducting from related assets in the event that the Group acquires assets with grants, according to Government Accounting Standards.

Details of government grants as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Cash and cash equivalents	₩ 2,569,145	₩ 2,486,292
Loans	2,057,239	2,057,239
Land	538,935	538,935
Buildings	358,496	380,348
Structures	1	1
Machinery	676,187	812,401
Vehicles	9,030	37,815
Other	24,471	29,455
Construction in progress	2,904,641	-
Exploration and evaluation assets	15,481,261	15,276,281
Available for sale financial assets	1,373,295	8,622,078
Investments in associates	51,208,357	86,605,881
Investments in joint ventures	34,889,005	34,889,005
	₩ 112,090,063	₩ 151,735,731

Changes in government grants for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousand):

	2015						
	January 1	Receipts	Acquisition	Amortization	Disposals	Reflected on profits	December 31
Cash and cash equivalent	₩ 2,486,292	₩ 26,864,000	₩ (3,119,381)	₩ -	₩ -	₩ (23,661,766)	₩ 2,569,145
Loans	2,057,239	-	-	-	-	-	2,057,239
Land	538,935	-	-	-	-	-	538,935
Buildings	380,348	-	-	(21,852)	-	-	358,496
Structures	1	-	-	-	-	-	1
Machinery	812,401	-	8,340	(144,371)	(183)	-	676,187
Vehicles	37,815	-	1,000	(29,785)	-	-	9,030
Others	29,455	-	420	(5,277)	(127)	-	24,471
Construction In progress	-	-	2,904,641	-	-	-	2,904,641
Exploration and evaluation assets	15,276,281	-	204,980	-	-	-	15,481,261
Available for sale financial assets	8,622,078	-	-	(7,248,784)	-	-	1,373,294
Investments in associates	86,605,881	-	-	(35,397,524)	-	-	51,208,357
Investments in joint ventures	34,889,005	-	-	-	-	-	34,889,005
	₩ 151,735,731	₩ 26,864,000	₩ -	₩ (42,847,593)	₩ (310)	₩ (23,661,766)	₩ 112,090,062

27. Government grants (cont'd)

	2014						
	January 1	Receipts	Acquisition	Amortization	Disposals	Reflected on profits	December 31
Cash and cash equivalent	₩ 233,720	₩ 28,104,000	₩ (187,716)	₩ -	₩ -	₩ (25,663,712)	₩ 2,486,292
Loans	2,057,239	-	-	-	-	-	2,057,239
Land	538,935	-	-	-	-	-	538,935
Buildings	402,199	-	-	(21,851)	-	-	380,348
Structures	1	-	-	-	-	-	1
Machinery	959,338	-	-	(146,937)	-	-	812,401
Vehicles	70,056	-	-	(32,241)	-	-	37,815
Others	6,731	-	26,510	(3,600)	(186)	-	29,455
Exploration and evaluation assets	15,276,281	-	-	-	-	-	15,276,281
Available for sale financial assets	8,622,078	-	-	-	-	-	8,622,078
Investments in associates	96,181,796	-	161,206	(9,737,121)	-	-	86,605,881
Investments in joint ventures	34,889,005	-	-	-	-	-	34,889,005
	₩ 159,237,379	₩ 28,104,000	₩ -	₩ (9,941,750)	₩ (186)	₩ (25,663,712)	₩ 151,735,731

Government grants reflected on profits for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Net income recognized	₩ 23,661,766	₩ 25,663,712

28. Other liabilities

Details of other liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Current	Non-current	Current	Non-current
Advances	₩ 1,417,903	₩ -	₩ 6,826,224	₩ -
Unearned income	1,170,064	-	1,413,485	-
Withholding	1,308,644	-	1,722,167	-
Others	10,032	51,002,390	28,443	52,076,180
	₩ 3,906,643	₩ 51,002,390	₩ 9,990,319	₩ 52,076,180

29. Issued capital

Details of issued capital as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			2014		
	Government	Non-government	Total	Government	Non-government	Total
Issued capital	₩ 1,887,670,200	₩ 2,700,000	₩ 1,890,370,200	₩ 1,707,470,200	₩ 2,700,000	₩ 1,710,170,200

Changes in issued capital for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
As at January 1	₩ 1,710,170,200	₩ 1,485,270,200
Issuance of share capital	180,200,000	224,900,000
As at December 31	₩ 1,890,370,200	₩ 1,710,170,200

29. Issued capital

Changes in discount on stock issuance for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015		2014
As at January 1	₩	(2,000,521)	₩	(2,191,142)
Issuance of share capital		(48,000)		(539,760)
Amortization		-		730,381
As at December 31	₩	(2,048,521)	₩	(2,000,521)

30. Retained earnings and dividends

Details of deficits as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015		2014
Legal reserve (*1)	₩	26,058,045	₩	61,891,400
Voluntary reserve		-		45,025,148
Undisposed deficits		(1,936,012,981)		(223,879,839)
	₩	(1,909,954,936)	₩	(116,963,291)

(*1) In accordance with the Korean Commercial Code, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of issued capital. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to capital.

Details of voluntary reserve as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015		2014
Reserve for business expansion	₩	-	₩	45,025,148

Changes in deficits for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousand):

		2015		2014
As at January 1	₩	(116,963,291)	₩	149,231,407
Profit (loss) for the year attributed to parent shareholder's equity		(1,792,559,023)		(259,482,796)
Dividends		-		(4,939,860)
Re-measurement of the net defined benefit liability		(432,622)		(1,041,661)
Amortization of discounts on stock issuance		-		(730,381)
As at December 31	₩	(1,909,954,936)	₩	(116,963,291)

Changes in re-measurement of the net defined benefit liability for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousand):

		2015		2014
As at January 1	₩	(1,758,337)	₩	(716,676)
Changes for the year		(554,644)		(1,335,463)
Tax effect		122,022		293,802
As at December 31	₩	(2,190,959)	₩	(1,758,337)

31. Statements of disposition of deficits

Statement of disposition of deficits for the years ended December 31, 2015 and 2014 are as follows (Korean won):

	2015	2014
Ⅰ. Undisposed deficits	₩ 1,698,325,755,223	₩ 80,858,503,053
1. Unappropriated retained earnings carried forward from the prior year	-	-
2. Loss for the year	1,697,893,132,652	79,816,841,906
3. Re-measurement gain and loss	432,622,571	1,041,661,147
Ⅱ. Disposition	26,058,044,906	80,858,503,053
1. Legal reserve	26,058,044,906	35,833,355,231
2. Reserve for business expansion	-	45,025,147,822
Ⅲ. Undisposed deficits to be carried forward to the next year	₩ 1,672,267,710,317	₩ -

32. Other components of equity

Details of other components of equity as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Gain (loss) on valuation of available-for-sale financial assets	₩ 2,089,253	₩ (12,805,744)
Changes in equity adjustment in equity method	117,819,434	45,881,039
Changes in equity	38,215,112	38,215,112
Exchange difference on translation of foreign operations	(7,610,179)	(39,254,369)
Effective portion of changes in fair value of cash flow hedge	351,264	699,026
Adjustment of government subsidy	(2,905)	(128,076)
	₩ 150,861,979	₩ 32,606,988

Changes in other components of equity for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

2015	Gain (loss) on valuation of available-for-sale financial assets	Changes in equity adjustment in equity method	Changes in equity	Exchange difference on translation of foreign operation	Effective portion of changes in fair value of cash flow hedge	Adjustment of government subsidy	Total
As at January 1	₩ (12,805,744)	₩ 45,881,039	₩ 38,215,112	₩ (39,254,369)	₩ 699,026	₩ (128,076)	₩ 32,606,989
Increase	(73,180)	71,938,395	-	31,644,190	879,538	125,171	104,514,113
Decrease	(14,968,177)	-	-	-	1,227,300	-	(13,740,877)
As at December 31	₩ 2,089,253	₩ 117,819,434	₩ 38,215,112	₩ (7,610,179)	₩ 351,264	₩ (2,905)	₩ 150,861,978

2014	Gain (loss) on valuation of available-for-sale financial assets	Changes in equity adjustment in equity method	Changes in equity	Exchange difference on translation of foreign operation	Effective portion of changes in fair value of cash flow hedge	Adjustment of government subsidy	Total
As at January 1	₩ (15,851,436)	₩ (27,359,926)	₩ 9,021,226	₩ (73,466,632)	₩ 919,319	₩ (203,557)	₩ (106,941,006)
Increase	3,045,692	73,240,965	29,193,886	34,212,263	681,239	75,481	140,449,526
Decrease	-	-	-	-	901,532	-	901,532
As at December 31	₩ (12,805,744)	₩ 45,881,039	₩ 38,215,112	₩ (39,254,369)	₩ 699,026	₩ (128,076)	₩ 32,606,988

33. Revenue

Details of revenue for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Domestic	Overseas	Domestic	Overseas
Mineral revenue	₩ 14,845,168	₩ 38,389,256	₩ 24,631,648	₩ 39,769,599
Interest income	96,219,053	-	79,866,028	217,511
Government grant revenue	23,661,766	-	25,663,712	-
Others	109,032,007	15,777,904	90,879,075	13,462,372
Financial currency trading profit	93,669,915	12,528,320	70,455,475	9,999,833
Reversal of provision for financial assets	6,921,362	-	252,149	-
Gain on disposition of investment in associates	-	2,993,725	-	-
Share of gain in associates and joint ventures	346,832	-	4,657,199	-
Commission income	7,766,494	255,859	10,676,456	1,604,007
Gain on derivative assets	327,404	-	4,837,796	1,858,532
	₩ 243,757,994	₩ 54,167,160	₩ 221,040,463	₩ 53,449,482

Cash flow hedge accounting was applied to a part of other income in foreign currency. To hedge the foreign currency income against the fluctuation risk of an exchange rate, the Group designated foreign currency derivatives as hedging instruments. Other income in 2015 and 2014 did not include the amount that the effective hedging portion of an income from hedging was reclassified.

34. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Payroll	₩ 9,447,579	₩ 7,733,259
Pension benefits	916,294	510,011
Employee welfare benefits	1,446,548	1,302,251
Insurance	18,445	24,951
Depreciation	1,386,978	3,056,191
Amortization of intangible assets	2,686,471	2,430,056
Fees and commission	11,137,930	7,794,909
Advertising	376,669	318,283
Training	126,986	367,141
Car maintenance	164,870	85,657
Book & printing	228,333	189,375
Business expenses	177,051	161,425
Rents	323,312	193,712
Communication	49,895	36,998
Transportation	-	197
Taxes and dues	1,402,517	357,163
Supplies	58,216	53,275
Utilities	165,737	59,766
Repairs and maintenance	114,940	67,626
Research and development	560,398	1,457,454
Travel and transportation	596,654	328,860
Uniforms	42,082	34,128
Research analysis expenses	36,172	13,554
Association fee	10,014	8,063
Contribution to employee welfare fund	-	195,260
Others	3,206,119	3,029,031
	₩ 34,680,210	₩ 29,808,596

35. Other income

Details of other income for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Reversal of allowance of doubtful accounts	₩	101,505	₩	743
Gain on exemption of liabilities		1,775,609		-
Compensations		16,141		210,646
Others		1,386,663		5,630,925
	₩	3,279,918	₩	5,842,314

36. Other expenses

Details of other expenses for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Other bad debt expenses	₩	568,538	₩	21,091
Donation		1,191,393		353,556
Other provisions		97,467,036		-
	₩	99,226,967	₩	374,647

37. Other gain and loss

Details of other gains and losses for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Gain on disposal of tangible assets	₩	41,759,329	₩	60,963
Loss on disposal of tangible assets		(727,869)		(5,166)
Loss on disposal of intangible assets		(129,065)		-
Loss on impairment of tangible assets		(941,535,247)		-
Loss on impairment intangible assets		(32,764,234)		-
Other losses		(1,018,780)		(1,186,126)
	₩	(934,415,866)	₩	(1,130,329)

38. Finance income

Details of finance income for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Interest income	₩	3,255,878	₩	5,991,337
Gain on foreign currency translation		29,750		5,666
Gain on foreign currency transaction		9,667,163		8,560,081
	₩	12,952,791	₩	14,557,084

38. Finance income (cont'd)

Details of Interest income for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Cash and cash equivalents	₩	415,373	₩	1,821,965
Current financial instruments		1,613,931		2,656,540
Non-current financial instruments		7,122		499,235
Loans		1,219,452		1,013,597
	₩	3,255,878	₩	5,991,337

39. Finance cost

Details of finance costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Interest expenses	₩	5,607,063	₩	10,232,151
Loss on foreign currency translation		4,248,517		1,816,775
Loss on foreign currency transactions		325,200		179,473
	₩	10,180,780	₩	12,228,399

Details of interest expenses for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Short-term borrowings	₩	5,605,063	₩	10,231,937
Others		2,000		214
	₩	5,607,063	₩	10,232,151

40. Income tax

Details of income tax for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Current income tax expense	₩	-	₩	-
Adjustments to prior year current income tax expense		182,947		1,460,685
Relating to origination and reversal of temporary difference		(128,798,639)		(5,816,092)
Total income tax benefit		(128,615,692)		(4,355,408)
Income taxes recognized directly in equity		122,022		293,802
Deferred tax directly charged to equity		4,201,153		921,175
Tax effects on subsidiaries		3,000,301		(570,960)
Income tax benefit	₩	(121,292,215)	₩	(3,711,391)

40. <u>Income tax (cont'd)</u>

Reconciliation of effective tax rate for the years ended December 31, 2014 and 2013 are as follows (Korean won in thousands):

	2015	2014
Loss before income taxes	₩ (2,184,866,231)	₩ (267,181,136)
Taxes at the statutory income tax rate of 22%	(480,670,571)	(58,779,850)
Non-temporary differences	403,653	631,295
Adjustments in respect of current income tax of prior years	(681)	17,022,915
Recognition of previously unrecognized tax loss, tax credit and temporary difference prior to previous period	372,040,140	32,784,247
Effect of a current taxable loss recognized	-	(3,678,531)
Others	(13,064,757)	8,308,533
Income tax benefit	₩ (121,292,216)	₩ (3,711,391)
Effective income tax rate (*1)	-	-

(*1) Effective income tax rate for the year ended December 31, 2015 and 2014 were not calculated due to sustained losses.

Income tax recognized directly in comprehensive income for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Re-measurement loss on defined benefit plans	₩ (122,021)	₩ (293,802)

Deferred income tax recognized directly in comprehensive income for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Loss on cash flow hedges	₩ -	₩ (62,134)
Gain on valuation of available-for-sale financial asset	(4,201,153)	(859,041)
	₩ (4,201,153)	₩ (921,175)

40. Income tax (cont'd)

Changes in deferred tax assets and liabilities for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		
	January 1	Increase (decrease)	December 31
Deferred taxes on temporary differences:			
Government grants	₩ 42,859,284	₩ 605,157	₩ 43,464,441
Gain and loss on foreign currency translation	5,828,232	(5,214,513)	613,719
Advanced depreciation provision	(41,572,615)	-	(41,572,615)
Prepaid expenses	(3,552,511)	723,783	(2,828,728)
Equity method investments	(6,517,937)	360,889,789	354,371,852
Changes in equity adjustment in equity method	(18,377,677)	-	(18,377,677)
Pension benefits	1,504,972	510,224	2,015,196
Allowance for doubtful accounts	3,541,427	(134,382)	3,407,045
Other non-current provisions	6,803,852	21,542,051	28,345,903
Tangible assets	(123,176,543)	166,938,369	43,761,826
Others	163,832,996	(78,439,552)	85,393,444
	31,173,480	467,420,926	498,594,406
Tax credit	-	2,402,523	2,402,523
Donation deduction	1,062,155	-	1,062,155
Unused tax losses	8,307,811	31,015,329	39,323,140
	40,543,446	500,838,778	541,382,224
Net deferred tax assets not recognized	47,264,707	372,040,140	419,304,847
	₩ (6,721,261)	₩ 128,798,638	₩ 122,077,377

40. <u>Income tax (cont'd)</u>

	2014		
	January 1	Increase (decrease)	December 31
Deferred taxes on temporary differences			
Government grants	₩ 42,365,305	₩ 493,979	₩ 42,859,284
Gain and loss on foreign currency translation	2,907,098	2,921,134	5,828,232
Advanced depreciation provision	(41,537,150)	(35,465)	(41,572,615)
Prepaid expenses	(3,874,011)	321,501	(3,552,511)
Equity method investments	(10,589,670)	4,071,733	(6,517,937)
Changes in equity adjustment in equity method	(18,377,677)	-	(18,377,677)
Pension benefits	2,234,009	(729,037)	1,504,972
Allowance for doubtful accounts	2,238,240	1,303,187	3,541,427
Other non-current provision	-	6,803,852	6,803,852
Others	7,320,188	33,336,265	40,656,453
	(17,313,668)	48,487,148	31,173,479
Tax credit	13,565,340	(13,565,340)	-
Donation deduction	1,062,155	-	1,062,155
Unused tax losses	4,629,280	3,678,531	8,307,812
	1,943,107	38,600,340	40,543,445
Net deferred tax assets not recognized	14,480,461	32,784,247	47,264,707
	₩ (12,537,354)	₩ 5,816,092	₩ (6,721,262)

Details of deferred tax assets and liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Deferred assets	₩ 122,077,377	₩ -
Deferred liabilities	-	6,721,262

41. Classification based on nature of expenses

Details of expenses based on nature of expenses for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		
	Selling and administrative expenses	Cost of sales	Total
Purchase of goods	₩ -	₩ 48,760,733	₩ 48,760,733
Loss on valuation of inventories	-	22,629,800	22,629,800
Interest expenses	-	46,430,413	46,430,413
Government subsidy agency expenses	-	23,661,766	23,661,766
Loss on transactions of financial exchange	-	154,555,406	154,555,406
Impairment loss on financial assets	-	49,741,854	49,741,854
Share of loss in associates and joint ventures	-	912,794,665	912,794,665
Impairment of investments in subsidiaries	-	2,771,290	2,771,290
Impairment of investments in joint ventures	-	94,884,246	94,884,246
Loss on derivatives	-	9,321,453	9,321,453
Changes in stock	-	(23,121,538)	(23,121,538)
Payroll	9,447,579	24,509,934	33,957,513
Pension benefits	916,294	2,569,578	3,485,872
Employee welfare benefits	1,446,548	4,631,268	6,077,816
Insurance	18,445	64,106	82,551
Depreciation	1,386,978	26,657,747	28,044,725
Amortization of intangible assets	2,686,471	800,000	3,486,471
Fees and commission	11,137,930	4,176,394	15,314,324
Advertising	376,669	17,220	393,889
Training	126,986	504,642	631,628
Car maintenance	164,870	578,029	742,899
Printing	228,333	90,946	319,279
Business expenses	177,051	42,999	220,050
Rents	323,312	984,217	1,307,529
Communication	49,895	147,412	197,307
Transportation	-	18,143	18,143
Taxes and dues	1,402,517	764,867	2,167,384
Supplies	58,216	410,995	469,211
Utilities	165,737	544,100	709,837
Repairs and maintenance	114,940	338,933	453,873
Research and development	560,398	726,898	1,287,296
Travel and transportation	596,654	2,081,771	2,678,425
Uniforms	42,082	110,235	152,317
Research analysis expenses	36,172	296,166	332,338
Association fee	10,014	124,379	134,393
Others	3,206,119	6,899,200	10,105,319
	₩ 34,680,210	₩ 1,420,520,269	₩ 1,455,200,479

41. Classification based on nature of expense (cont'd)

	2014		
	Selling and administrative expenses	Cost of sales	Total
Purchase of goods	₩ -	₩ 54,821,105	₩ 54,821,105
Loss on valuation of Inventories	-	3,902,201	3,902,201
Interest expenses	-	105,558,973	105,558,973
Government subsidy agency expenses	-	25,663,712	25,663,712
Loss on transactions of financial exchange	-	90,263,118	90,263,118
Impairment loss on financial assets	-	8,930,807	8,930,807
Share of loss in associates and joint ventures	-	139,603,791	139,603,791
Impairment of investments in subsidiaries	-	9,916,081	9,916,081
Impairment of investments in joint ventures	-	2,175,140	2,175,140
Loss on derivatives	-	16,075,759	16,075,759
Changes in stock	-	(9,372,807)	(9,372,807)
Payroll	7,733,259	24,744,333	32,477,592
Pension benefits	510,011	2,923,745	3,433,756
Employee welfare benefits	1,302,251	4,701,532	6,003,783
Insurance	24,951	57,670	82,621
Depreciation	3,056,191	17,370,382	20,426,573
Amortization of intangible assets	2,430,056	806,987	3,237,043
Fees and commission	7,794,909	337,190	8,132,099
Advertising	318,283	-	318,283
Training	367,141	217,933	585,074
Car maintenance	85,657	72,620	158,277
Printing	189,375	7,955	197,330
Business expenses	161,425	62,991	224,416
Rents	193,712	310,458	504,170
Communication	36,998	58,044	95,042
Transportation	197	-	197
Taxes and dues	357,163	252,445	609,608
Supplies	53,275	61,527	114,802
Utilities	59,766	129,420	189,186
Repairs and maintenance	67,626	48,215	115,841
Research and development	1,457,454	403,793	1,861,247
Travel and transportation	328,860	8,299	337,159
Uniforms	34,128	101,501	135,629
Research analysis expenses	13,554	-	13,554
Association fee	8,063	13,639	21,702
Contribution to employee welfare fund	195,260	577,740	773,000
Others	3,029,031	17,722,208	20,751,239
	₩ 29,808,596	₩ 518,528,507	₩ 548,337,103

42. Categories of financial instruments

Details of the book value of current financial assets as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			2014		
	Derivative designated as hedging instrument	Loans and receivables	Total	Financial asset or liability at fair value through profit or loss	Loans and receivables	Total
Cash and cash equivalents	₩ -	₩ 145,344,744	₩ 145,344,744	₩ -	₩ 155,560,758	₩ 155,560,758
Current loans	-	114,074,781	114,074,781	-	130,983,884	130,983,884
Current financial instruments	-	1,481,206	1,481,206	-	794,170	794,170
Derivatives assets	351,264	-	351,264	4,837,796	-	4,837,796
Other financial assets	-	455,303	455,303	-	103,478	103,478
Trade and other receivables	-	103,298,252	103,298,252	-	84,533,318	84,533,318
	₩ 351,264	₩ 364,654,286	₩ 365,005,550	₩ 4,837,796	₩ 371,975,608	₩ 376,813,405

Details of the book value of non-current financial assets as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Loans and receivables	Available-for-sale financial assets	Derivatives designated as hedging instrument	Total
Available-for-sale financial assets	₩ -	₩ 1,864,730	₩ -	₩ 1,864,730
Non-current loans	1,166,930,670	-	-	1,166,930,670
Non-current financial instruments	8,184	-	-	8,184
Trade and other receivables	9,020,965	-	-	9,020,965
	₩ 1,175,959,819	₩ 1,864,730	₩ -	₩ 1,177,824,549

	2014			
	Loans and receivables	Available-for-sale financial assets	Derivatives designated as hedging instrument	Total
Available-for-sale financial assets	₩ -	₩ 30,453,284	₩ -	₩ 30,453,284
Non-current loans	1,252,381,419	-	-	1,252,381,419
Non-current financial instruments	670,677	-	-	670,677
Derivatives assets	-	-	896,188	896,188
Trade and other receivables	1,668,555	-	-	1,668,555
	₩ 1,254,720,651	₩ 30,453,284	₩ 896,188	₩ 1,286,070,123

42. Categories of financial instruments (cont'd)

Detail of book value of current financial liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
	Financial liabilities with amortized cost	Financial liabilities with amortized cost
Trade and other payables	₩ 72,834,611	₩ 111,644,286
Short-term borrowings	385,015,200	370,000,000
Current portion of long-term borrowings	61,473,158	461,237,510
Current portion of long-term bonds payable	539,081,961	549,397,811
	₩ 1,058,404,930	₩ 1,492,279,607

Detail of book value of non-current financial liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		
	Financial liabilities at fair value through profit or loss	Financial liabilities with amortized cost	Total
Long-term borrowings (*1)	₩ -	₩ 661,427,353	₩ 661,427,353
Bonds payable	-	2,585,115,827	2,585,115,827
Derivative liabilities	14,587,193	-	14,857,193
Other financial liabilities	-	67,558,290	67,558,290
	₩ 14,587,193	₩ 3,314,101,470	₩ 3,328,958,663

	2014		
	Financial liabilities at fair value through profit or loss	Financial liabilities with amortized cost	Total
Long-term borrowings (*1)	₩ -	₩ 241,574,585	₩ 241,574,585
Bonds	-	2,008,997,897	2,008,997,897
Derivative liabilities	5,951,618	-	5,951,618
Others	-	123,430,219	123,430,219
	₩ 5,951,618	₩ 2,374,002,701	₩ 2,379,954,319

(*1) Long-term borrowings include net borrowings from Special Account for Energy and Resources, which account for the amount of borrowings offset against the loans taken out of Special Account for Energy and Resources.

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42. Categories of financial instruments (cont'd)

Details of gain or loss from financial instruments by categories for the year ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015	2014
Loans and receivables:		
Interest income	₩ 99,474,931	₩ 86,074,876
Bad debt expense	(3,124,776)	(8,699,006)
Available-for-sale financial assets:		
Loss on impairment of available-for-sale financial assets	(40,162,749)	-
Current comprehensive income (*1)	14,894,996	3,045,692
Financial assets at fair value through profit or loss:		
Gain on settlement of derivatives	327,404	-
Gain on valuation of derivatives	-	4,837,796
Derivative Designated as hedging instrument:		
Loss on settlement of derivatives	(1,104,249)	(1,155,812)
Current comprehensive income (*1)	(425,040)	(220,293)
Financial assets at fair value through profit or loss:		
Loss on settlement of derivatives	-	(7,358,756)
Gain on valuation of derivatives	(8,217,204)	(5,702,660)
Financial liabilities with amortized cost:		
Interest expenses	(52,037,476)	(115,791,124)
	₩ 9,625,837	₩ (44,969,287)

(*1) Other comprehensive income (loss) reflects deferred tax effect.

43. Financial risk management

(1) Financial risk management objectives and policies

The Group's principal financial liabilities, other than derivatives, comprise loans and borrowings, trade and other payables, and financial guarantee contracts. The main purpose of these financial liabilities is ti finance the Group's operaions and to provide guarantees to support its operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds various financial instruments and enters into derivative transactions.

The Group is exposed to market risk, credit risk, interest rate risk and liquidity risk. The Group's senior management oversees the management of these risks so that financial risks are identified, measured and managed in accordance with the Group's policies and risk objectives.

The Board of Directors reviews and agrees policies for managing each of these risks, which are summarized below.

(2) Market risk

Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities (when revenue or expense is denominated in a different currency from the Group's presentation currency) and the Group's net investments in foreign subsidiaries.

When the nature of the hedge relationship is not an economic hedge, it is the Group's policy to negotiate the terms of the hedging derivatives to match the terms of the underlying hedge items to maximize hedge effectiveness.

The book value of monetary assets and liabilities which are not presented in functional currency as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

43. Financial risk management (cont'd)

	2015						
	USD	CNY	MXP	CHF	AUD	Others	Total
Financial assets	₩ 1,551,917,671	₩ 35,203,591	₩ 101,821,065	₩ -	₩ -	₩ 209,519	₩ 1,689,151,846
Financial liabilities	2,144,868,665	19,963	95,469,842	119,661,691	85,955,101	-	2,455,975,263
	₩ (592,950,994)	₩ 35,183,628	₩ 6,351,223	₩ (119,661,691)	₩ (85,955,101)	₩ 209,519	₩ (756,823,417)

	2014					
	USD	CNY	CAD	MXP	Others	Total
Financial assets	₩ 1,565,417,521	₩ 39,835,505	₩ 188,421	₩ 7,112,662	₩ 159,794	₩ 1,612,713,903
Financial liabilities	2,055,264,900	-	-	98,529	-	2,055,363,429
	₩ (489,847,379)	₩ 39,835,505	₩ 188,421	₩ 7,014,133	₩ 159,794	₩ (442,649,526)

The following table demonstrates the sensitivity analysis of a reasonably possible change in the Korean won exchange rate, with all other variables held constant, on the Group's profit before tax as at December 31, 2015 and 2014 are as follows (Korean won in thousand):

	2015		2014	
	10% up	10% down	10% up	10% down
Profit before tax	₩ (75,682,342)	₩ 75,682,342	₩ (44,264,953)	₩ 44,264,953

The sensitivity analyses were conducted on monetary assets and liabilities which were presented in foreign currency other than functional currency at the reporting date.

Interest rate risk

Interest rate risk commonly arises from fluctuations in the future market interest-rate, and mainly involves loans and deposits with floating-rates condition. This can create variables in the interest revenue and interest fee initially promised by loans and deposits. The purpose of the Group's interest rate risk management is to minimize the financial cost and the uncertainty of future changes in interest rates.

The Group manages interest rate risk by preemptively utilizing internal reserves to reduce external borrowings, minimizing the high interest-rate debt proportions, improving short-term and long-term borrowing structure, maintaining appropriate percentage between floating-rate and fixed-rate borrowings, regularly monitoring and implementing domestic and overseas interest-rates trend, and establishing risk countermeasures.

Financial assets and liabilities with floating-rates that are exposed to interest rate risks for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands) :

	2015	2014
Financial assets	₩ 1,052,753,048	₩ 1,359,797,982
Financial liabilities	(1,061,295,560)	(564,908,134)
	₩ (8,542,512)	₩ 794,889,848

43. Financial risk management (cont'd)

The following table demonstrates the sensitivity analysis to a reasonably possible change in interest rates on that portion of borrowings. With all other variables held constant, the effect of changes in interest rates of floating rate borrowings on profit before tax is as follows (Korean won in thousands):

	2015		2014	
	+ 100bp	- 100bp	+ 100bp	- 100bp
Profit before tax	₩ (85,425)	₩ 85,425	₩ 7,948,898	₩ (7,948,898)

Other price risk

The Group is susceptible to market price risk arising from uncertainties about future values of the financial instrument and cash flows regarding to listed equity securities out of available for sales and measures the risk of fluctuation of prices, periodically. The material investment in portfolio are managed individually and the Group's Board of Directors reviews and approves all the Group's investment decisions.

(3) Credit risk

Credit risk is the risk that a counterparty will not meet ist obligations under a financial instrument or customer contract, leading to financial loss. The Group is exposed to credit risk from ist operating activities, primarily loans, receivables, available-for-sale assets and derivative assests.

Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance. The Group evaluates the impairment of trade and other receivables at every reporting date.

The group's financial assets that are exposed to credit risk and the maximum exposure to credit risk at the reporting date is as follows (Korean won in thousands):

		2015	2014
Loans and receivables	Cash and cash equivalents	₩ 145,344,744	₩ 155,560,758
	Long and short-term financial instruments	1,489,390	1,464,847
	Trade and other receivables	112,319,217	86,201,873
	Long and Short-term loans	1,281,005,451	1,383,365,303
	Others	455,303	103,478
Available-for-sale assets (excluding equity securities)		1,864,730	30,413,216
Derivative assets		351,264	5,733,984
		₩ 1,542,830,099	₩ 1,662,883,527

Other than the above, the maximum amount that the Group has provided guarantees to unrelated parties for its performance in contracts is disclosed in Note 45.

43. Financial risk management (cont'd)

While the Group establishes an allowance for the trade receivable which is likely to be impaired due to bankruptcy or whose cash flows are estimable as the trade receivable belongs to a specific project, it determines an allowance for a group of financial assets with similar characteristics based on aging analysis and historical percentage of uncollected sales. For available-for-sale financial assets, held-to-maturity financial assets, deposits, and derivatives, the Group recognizes an impairment loss on an individual asset.

(4) Liquidity risk

The Group is exposed to liquidity risk that it may face difficulties in settling financial liabilities in cash or with financial assets

The Group forecasts the cash flow of operation, investment and financial activities on the basis of routinely established plans and responds to financial liabilities and assets. Moreover the group secures and sustains required liquidity to manage possible liquidity risks in advance.

The table below summarizes the maturity profile of the Group's financial liabilities based on contractual undiscounted payments (Korean won in thousands):

	2015			
	Total	Under 1 year	1 ~ 5 years	Over 5 years
Borrowings	₩ 1,107,915,710	₩ 446,488,358	₩ 578,426,407	₩ 83,000,945
Bonds payable	3,124,197,788	539,081,961	2,075,303,581	509,812,245
Trade and other payables	72,834,611	72,834,611	-	-
Non-current other financial liabilities	67,558,290	-	67,558,290	-
	₩ 4,372,506,399	₩ 1,058,404,930	₩ 2,721,288,278	₩ 592,813,190

	2014			
	Total	Under 1 year	1 ~ 5 years	Over 5 years
Borrowings	₩ 1,072,812,095	₩ 831,237,510	₩ 165,316,230	₩ 76,258,355
Bonds payable	2,558,395,708	549,397,811	1,709,104,641	299,893,256
Trade and other payables	111,644,286	111,644,286	-	-
Non-current financial liabilities	123,430,219	-	123,430,219	-
	₩ 3,866,282,308	₩ 1,492,279,607	₩ 1,997,851,090	₩ 376,151,611

43. Financial risk management objectives and policies (cont'd)

(5) Capital management

The objective of the Group's capital risk management is to secure its ability to provide earnings to its shareholders and interested parties and sustain optimal capital structure to reduce the cost of capital. In order to sustain optimal capital structure, the Group uses a debt-to-equity ratio similar to other entities in the industry. Debt-to-equity ratio is calculated by dividing total liabilities by total equity.

The Group's debt-to assets ratio as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Aggregate liabilities	₩	4,620,565,222	₩	4,020,223,057
Aggregate assets		66,916,134		1,831,746,382
Debt ratio		6,905%		219.47%

43. Financial risk management objectives and policies (cont'd)

(6) Fair value and book value

Detail of fair value and book value of financial asset and liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
	Book value	Fair value	Book value	Fair value
Financial assets measured at fair value:				
Available-for-sale financial assets	₩ 1,864,730	₩ 1,864,730	₩ 30,453,284	₩ 30,453,284
Derivative assets	351,264	351,264	5,733,984	5,733,984
	2,215,994	2,215,994	36,187,268	36,187,268
Financial assets measured at amortized cost:				
Cash and cash equivalents	145,344,743	145,344,743	155,560,758	155,560,758
Short-term loans	114,074,781	114,074,781	130,983,884	130,983,884
Long-term loans	1,166,930,670	1,166,930,670	1,252,381,419	1,252,381,419
Short-term financial instruments	1,481,206	1,481,206	794,170	794,170
Long-term financial instruments	8,184	8,184	670,677	670,677
Trade and other receivables	103,298,252	103,298,252	84,533,318	84,533,318
Long-term trade and other receivables	9,020,965	9,020,965	1,668,555	1,668,555
Other financial assets	455,303	455,303	103,478	103,478
	1,540,614,104	1,540,614,104	1,626,696,259	1,626,696,259
	₩ 1,542,830,098	₩ 1,542,830,098	₩ 1,662,883,527	₩ 1,662,883,527
Financial liabilities measured at fair value:				
Derivative liabilities	₩ 14,857,193	₩ 14,857,193	₩ 5,951,618	₩ 5,951,618
Financial liabilities measured at amortized cost:				
Short-term borrowings	385,015,200	385,015,200	370,000,000	370,000,000
Current portion of long-term borrowings	61,473,158	61,473,158	461,237,510	461,237,510
Current portion of long-term bonds	539,081,961	539,081,961	549,397,811	549,397,811
Long-term borrowings	661,427,353	661,427,353	241,574,585	241,574,585
Bonds payable	2,585,115,827	2,585,115,827	2,008,997,897	2,008,997,897
Trade and other payables	72,834,611	72,834,611	111,644,286	111,644,286
Other financial liabilities	67,558,290	67,558,290	123,430,219	123,430,219
	4,372,506,400	4,372,506,400	3,866,282,308	3,866,282,308
	₩ 4,387,363,592	₩ 4,387,363,592	₩ 3,872,233,926	₩ 3,872,233,926

43. Financial risk management objectives and policies (cont'd)

(7) Fair value hierarchy

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

The following table provides the fair value measurement hierarchy of the Group's Financial assets and liabilities as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015			
	Level 1	Level 2	Level 3	Total
Loans and receivables	₩ -	₩ 146,834,133	₩ 1,393,779,971	₩ 1,540,614,104
Available-for-sale financial assets	288,396	-	1,576,334	1,864,730
Derivative assets	-	351,264	-	351,264
	₩ 288,396	₩ 147,185,397	₩ 1,395,356,305	₩ 1,542,830,098
Borrowings	₩ -	₩ 1,107,915,710	₩ -	₩ 1,107,915,710
Bonds payable	-	3,124,197,788	-	3,124,197,788
Trade and other payables	-	-	72,834,611	72,834,611
Derivative liabilities	14,857,193	-	-	14,857,193
Other financial liabilities	-	-	67,558,289	67,558,289
	₩ 14,857,193	₩ 4,232,113,498	₩ 140,392,900	₩ 4,387,363,591

	2014			
	Level 1	Level 2	Level 3	Total
Loans and receivables	₩ -	₩ 157,025,605	₩ 1,469,670,655	₩ 1,626,696,260
Available-for-sale financial assets	892,842	-	29,560,441	30,453,283
Derivative assets	4,837,796	896,188	-	5,733,984
	₩ 5,730,638	₩ 157,921,793	₩ 1,499,231,096	₩ 1,662,883,527
Borrowings	₩ -	₩ (1,072,812,095)	₩ -	₩ (1,072,812,095)
Bonds payable	-	(2,558,395,708)	-	(2,558,395,708)
Trade and other payables	-	-	(111,644,286)	(111,644,286)
Derivative liabilities	(5,951,618)	-	-	(5,951,618)
Other financial liabilities	-	-	(123,430,219)	(123,430,219)
	₩ (5,951,618)	₩ (3,631,207,803)	₩ (235,074,505)	₩ (3,872,233,926)

There were no movements between levels for the years ended December 31, 2015 and 2014.

44. Related party transactions

The related parties of the Group are as follows:

	Name
Subsidiaries	KORES Australia Pty. Ltd., KORES CANADA Corp., Minera Corocobre S.A, KORES Chile SPA, Sarisbury Limited, Stonebridge Trading 36, Prime Asia Resources Kores Lux S.a.r.l and its subsidiaries, Ermani Ltd.
Associates (*1)	YoungWoo Resources Co., Ltd., GMC, Korea Alumina, Jungchon Natural Graphite Cooperation, United Copper & Moly LLC Philco Resource Ltd., Korean Boleo Corporation on S.A. de C.V., Saldebida Korea Xian Maxun KORES New Material Co., Ltd. AnhuishengWonjin Mining Industry Co.,Ltd ZhangjiagangWonjin-KORES Industrial Material Co., Ltd. ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd. POSCO KORES Yongxin Rare Earth Metal Co., Ltd., Enerchem AnhuishengWonjinJinyuan Calcium Industry Co., Ltd, AMSA/DMSA(Ambatovy) K.K.LAO Mining Company, Haein Resource Corporation, KPMC, PT. DDS , PT. KCT , Capstone Mining Corp. , KCMC(Acquisition co.), Mukuze
Joint venture	Minerva, Moolarben, Athena, White Cliff, Marree, Boulia, Narrabri, Togara North, KLS, Cree-East, UltimatumChallenge Trading36 Ltd.

Equity investment in Korea Alumina was reclassified as assets held for distribution in discontinued operations.

Transactions between inter-group entities have not been eliminated and details have not been disclosed in the notes to the consolidated financial statements. The transactions with the Group, associates and joint ventures are as follows.

Significant transactions with related parties (except finance and equity transactions) for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015			
	Name	Interest income	Dividend income	Commission income	Purchase of goods
Associates	YoungWoo Resources Co., Ltd	₩ 94,877	₩ -	₩ 144	₩ -
	Korea Alumina	-	-	88,392	-
	United Copper & Moly LLC	-	-	13,883	-
	Korean Boleo Corporation on S.A de C.V	1,572,484	-	-	-
	Xian Maxun KORES New Material Co., Ltd..	100,756	-	-	-
	AMSA/DMSA (Ambatovy)	55,607,880	-	733,806	14,076,803
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	58,423	289,352	88,661	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	125,373	1,013,414	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	123,228	-	-	-
	AnhuishengWonjinJinyuan Calcium Industry Co., Ltd.	-	341,826	-	-
	Haein Resources Co., Ltd	-	-	105	-
	KPMC	16,239,637	-	-	-
		₩ 73,922,658	₩ 1,644,592	₩ 924,991	₩ 14,076,803

44. Related party transactions (cont'd)

		2014			
	Name	Interest income	Dividend income	Commission income	Purchase of goods
Associates	YoungWoo Resources Co., Ltd	₩ 76,336	₩ -	₩ 5,184	₩ -
	Korea Alumina	-	-	101,592	-
	Philco Resource Ltd.	-	11,026,435	-	-
	Xian Maxun KORES New Material Co., Ltd.	94,405	-	-	-
	AnhuishengWonjin Mining Industry Co.,Ltd.	-	230,478	-	-
	AMSA/DMSA (Ambatovy)	43,721,909	-	275,425	23,849,577
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	74,127	395,529	151,648	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	159,102	1,258,019	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	122,075	-	-	-
	Enerchem	-	-	116,000	-
	AnhuishengWonjinJinyuan Calcium Industry Co., Ltd.	-	43,583	-	-
	KPMC	7,196,126	-	33,193	-
		₩ 51,444,080	₩ 12,954,044	₩ 683,042	₩ 23,849,577

The outstanding receivables and payables arising from the transactions with related parties as at December 31, 2015 and 2014 are as follows (Korean won in thousands):

		2015				
	Name	Loans	Accrued Income	Other receivables	Trade payables	Advance
Associates	YoungWoo Resources Co., Ltd	₩ 2,666,590	₩ 3,931	₩ -	₩ -	₩ -
	Korea Alumina	-	-	5,683	-	-
	Korean Boleo Corporation on S.A de C.V	26,620,152	1,572,484	-	-	-
	Xian Maxun KORES New Material Co., Ltd.	2,015,116	103,240	-	-	-
	AMSA/DMSA (Ambatovy)	578,622,139	1,201,200	156,506	1,199,036	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	961,040	401,974	-	-	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	2,062,720	5,815	-	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	2,567,256	532,259	-	-	-
	Enerchem	-	-	7,333	-	217,800
	AnhuishengWonjinJinyuan Calcium Industry Co., Ltd.	-	341,826	-	-	-
	Haein Resource Corporation	2,711,270	-	3,822	-	-
	KPMC	228,539,817	-	-	-	-
		₩ 846,766,101	₩ 4,162,729	₩ 173,344	₩ 1,199,036	₩ 217,800

44. Related party transactions (cont'd)

	Name	2014 Loans	Accrued Income	Other receivables	Advance
Associates	YoungWoo Resources Co., Ltd	₩ 2,748,060	₩ 4,204	₩ -	₩ -
	Korea Alumina	-	-	9,313	-
	Xian Maxun KORES New Material Co., Ltd.	1,889,945	2,330	-	-
	AnhuishengWonjin Mining Industry Co.,Ltd.	-	81,507	-	-
	AMSA/DMSA (Ambatovy)	794,042,549	1,393,092	70,098	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	1,081,613	399,356	-	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	2,321,510	1,266,233	-	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	2,543,235	403,498	-	-
	Enerchem	-	-	7,333	217,800
	Haein Resource Corporation	2,711,270	4,247	-	-
	KPMC	139,149,805	-	-	-
		₩ 946,487,987	₩ 3,554,467	₩ 86,744	₩ 217,800

Financial transactions (including investment) with related parties for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	Name	2015 Loans	Equity investment	Loans collected	Loans collected (Debt to equity swap)
Associates	YoungWoo Resources Co., Ltd	₩ 615,000	₩ -	₩ 696,470	₩ -
	GMC	-	94,600	-	-
	United Copper & Moly LLC	-	11,767	-	-
	Korean Boleo Corporation on S.A. de C.V.	25,047,668	-	-	-
	AMSA/DMSA (Ambatovy)	137,281,260	382,109,400	-	382,109,400
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	-	-	180,269	-
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	-	-	386,918	-
	POSCO KORES Yongxin Rare Earth Metal Co., Ltd.	-	11,414,102	-	-
	K.K.LAO Mining Company	-	33,234	-	-
	KPMC	77,622,437	22,287	-	-
Joint venture	KLS	-	4,128,506	-	-
		₩ 240,566,365	₩ 397,813,896	₩ 1,263,657	₩ 382,109,400

44. Related party transactions (cont'd)

		2014		
	Name	Loans	Equity investment	Loans collected
Associates	YoungWoo Resources Co., Ltd	₩ 1,459,000	₩ -	₩ 809,490
	United Copper & Moly LLC	-	16,184	-
	Korean Boleo Corporation on S.A. de C.V.	-	102,838	-
	AMSA/DMSA (Ambatovy)	146,588,262	-	-
	ZhangjiagangWonjin-KORES Industrial Material Co., Ltd.	-	-	173,069
	ZhangjiagangWonjin-KORES Resources Recovery Reutilization Co., Ltd.	-	-	371,466
	K.K.LAO Mining Company	-	331,505	-
	KPMC	69,201,316	218,585	-
	Mukuze	-	19,212	-
	PT. KCT	-	473,949	-
Joint venture	KLS	-	7,641,373	-
		₩ 217,248,578	₩ 8,803,646	₩ 1,354,025

45. Guarantees and assets pledged

Details of guarantees provided to others as at December 31, 2015 are as follows (USD in unit):

	Receiver	Provider	Currency	Amount	Reasons	Guarantee date	Guarantee period
AMSA/DMSA (Ambatovy)	Sherritt	Korea Exim Bank	USD	150,000,000	Construction guarantee	2013.08.22	2013.08.22 ~ 2023.07.05
			USD	450,000,000		2013.08.22	2013.08.22 ~ 2019.06.20
MMB	MMB	Underwriter of Global Bond payable	USD	340,000,000	Guarantee the bond issued by MMB	2014.05.07	2014.05.07 ~ 2019.05.07
			USD	105,042,017	Guarantee the bond issued by MMB (*1)	2014.11.12	2014.11.12 ~ 2019.11.12
			USD	85,000,000	Guarantee the bond issued by MMB (*1)	2014.12.03	2014.12.03 ~ 2019.12.03
MMB	MMB	HSBC	USD	9,900,000	Payment guarantee for borrowings	2015.04.09	2015.04.09 ~ 2016.04.09
		Underwriter of Global Bond payable	USD	120,000,000	Guarantee the bond issued by MMB	2015.07.01	2015.07.01 ~ 2019.05.07

(*1) The Company provided payment guarantees for the notes amounting to CHF100,000,000 and AUD100,000,000 issued by MMB, a subsidiary, and MMB entered into USD currency swap contracts for the notes under the payment guarantees by the Company in 2014. The Group disclosed the notes and swaps for which the Company provided payment guarantee.

Details of assets that have been pledged as collateral for others as at December 31, 2015 are follows (USD in unit):

Provider	Collateral asset	Currency	Amount	Receiver	Reasons
AMSA/DMSA	Ambatovy Stock	USD	1,087,504,166	PF Creditor	PF Security

46. Commitments

Details of the major financing agreements guaranteed by the Group as at December 31, 2015 are as follow (Korean won in thousands):

Commitments	Financial institutions	Currency	Limited	
Bank Overdraft	Kookmin Bank	KRW	₩	24,000,000

47. Litigations

Details of litigations as at December 31, 2015 are as follows (Korean won in thousands, USD in unit):

Plaintiff	Details	Amount		Progress
Hana UBS Ambatovy nickel overseas resources development Co.,Ltd. and one(1) individual	Confirmation for profit sharing right	₩	-	In the second trial (*1)
K&P Partners Investment Co., Ltd & O Gwang Myeong	Claim for damages	USD	3,300,000	In the second trial

(*1) As the Group lost in the first trial on December 19, 2014, it recognized an expected loss due to an extension of the term of payment to plaintiffs as a current operating expense, and recorded \31,154,376 thousand for the provision for lawsuits (Note 26).

48. Cash flow statement

Significant transactions not involving cash flows for the years ended December 31, 2015 and 2014 are as follows (Korean won in thousands):

	2015		2014	
Refinancing of a current liabilities using long term debt	₩	374,755,477	₩	-
Transfer of current portion of long-term borrowings and bonds		335,456,579		1,000,742,967
Transfer from construction-in-progress to property, plant and equipment		34,280,488		16,653,156
Debt to equity swap		382,109,400		-
Transfer of current portion of long-term loans		101,121,411		147,600,318

49. Assets held-for-sale

Assets held-for-sale as at December 31, 2015 are detailed below:

Equity securities held-for-sale		
PT.DDS (*1)	₩	13,097,694
Korea Alumina (*2)		10,348,691
	₩	23,446,385

(*1) Prime Asia Resources, a subsidiary, entered into a contract to sell its equity interest in PT. DDS, an associate, to Prime Great Wise Capital Inc. Due to an equity sale, a gain on disposal of equity investment in an associate of ₩2,993,724 thousand was recognized, and the equity sale will be completed on June 30, 2016.

(*2) The Company entered into a contract to sell its equity interest in Korea Alumina, an associate, to KC Co., Ltd. and received ₩1,200,000 thousand of an advance payment in 2015. The equity sale will be completed on December 31, 2025.

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