



Doosan Heavy Industries & Construction Co., Ltd.

Separate Financial Statements and Independent Auditor's Report

**As at and For the Years Ended
December 31, 2015 and 2014**

Doosan Heavy Industries & Construction Co., Ltd.

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Independent auditors' report

The Board of Directors and Stockholders Doosan Heavy Industries & Construction Co., Ltd.

We have audited the accompanying separate financial statements of Doosan Heavy Industries & Construction Co., Ltd. (the "Company"), which comprise the separate statements of financial position as at December 31, 2015, and 2014, and the separate statements of profit or loss, separate statements of comprehensive income or loss, separate statements of changes in equity and separate 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 Separate Financial Statements

Management is responsible for the preparation and fair presentation of these separate financial statements in accordance with Korean International Financial Reporting Standards (KIFRS), and for such internal control as management determines is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these separate 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 separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the separate financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the separate financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the separate financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the separate financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the separate financial statements present fairly, in all material respects, the separate financial position of Doosan Heavy Industries & Construction Co., Ltd. as at December 31, 2015 and 2014 and its financial performance and its cash flows for the years then ended in accordance with KIFRS.

Ernst & Young Han Young

March 17, 2016

This audit report is effective as at March 17, 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 separate financial statements and may result in modifications to this report.

Doosan Heavy Industries & Construction Co., Ltd.

Separate financial statements for the years ended December 31, 2015 and 2014

“The accompanying separate financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Company.”

Geewon Park
Chief Executive Officer
Doosan Heavy Industries & Construction Co., Ltd.

Doosan Heavy Industries & Construction Co., Ltd.
Separate 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	4, 10	₩ 754,506,961,500	₩ 295,172,572,341
Short-term financial instruments	4, 5, 10, 31	65,207,026,775	17,193,921,865
Short-term investments in securities	4, 6, 10	-	7,000,000,000
Trade receivables	4, 7, 10, 23, 32	763,575,517,125	744,721,203,112
Due from customers for contract work	23, 32	1,382,456,267,695	1,060,043,511,836
Other receivables	4, 7, 10, 32	152,459,642,272	133,776,850,193
Prepayments	7	403,998,475,652	420,719,456,898
Prepaid expenses		12,066,591,164	18,190,462,159
Short-term loans	4, 7, 10, 32	16,927,378,119	18,068,586,800
Derivative financial assets	4, 9, 10	8,355,116,563	16,588,094,363
Firm commitment assets	9	59,420,708,437	20,008,150,905
Inventories	8	307,231,584,236	330,767,777,123
Other current assets	4, 7, 10	11,692,088,650	29,566,276,704
Total current assets		3,937,897,358,188	3,111,816,864,299
Non-current assets:			
Long-term financial instruments	4, 5, 10	19,962,179,512	80,684,972,135
Long-term investments in securities	4, 6, 10	51,080,459,808	47,229,841,833
Share of investments in subsidiaries, associates and joint ventures	11	3,706,246,284,182	3,902,676,918,279
Long-term loans	4, 7, 10, 32	60,516,350,000	55,342,976,000
Property, plant and equipment	2, 12, 31	3,052,376,158,609	2,636,179,112,553
Intangible assets	13	623,362,270,949	592,124,892,669
Derivative financial assets	4, 9, 10	55,939,683,148	24,458,474,062
Firm commitment assets	9	63,021,633,219	29,678,637,872
Guarantee deposits	4, 5, 7, 10	66,676,697,298	67,647,514,665
Other non-current assets	4, 7, 10	48,545,131,955	3,156,103,281
Total non-current assets		7,747,726,848,680	7,439,179,443,349
Total assets		₩ 11,685,624,206,868	₩ 10,550,996,307,648

(Continued)

The accompanying notes are an integral part of the separate financial statements.

Doosan Heavy Industries & Construction Co., Ltd.
Separate statements of financial position
as at December 31, 2015 and 2014 (cont'd)

(Korean won in units)

	Notes	2015	2014
Liabilities and equity			
Current liabilities:			
Trade payables	4, 10, 32	₩ 1,023,863,182,473	₩ 959,162,263,845
Short-term borrowings	4, 10, 14, 31	1,397,843,513,057	625,082,217,140
Asset-backed loans	14	32,879,881,289	-
Other payables	4, 10, 32	361,917,391,966	338,120,030,281
Advanced receipts		12,672,361,229	49,786,952,158
Due to customers for contract work	23	736,794,817,440	747,018,343,580
Withholdings		1,806,196,931	6,527,598,592
Accrued expenses	4, 10	78,496,432,457	78,058,104,907
Current income tax liabilities		5,866,740,745	38,280,580,051
Current portion of long-term debt	4, 10, 14, 31	819,490,332,731	639,902,766,973
Derivative financial liabilities	4, 9, 10	129,325,339,670	110,995,271,543
Firm commitment liabilities	9	4,052,311,007	48,487,736,864
Other current liabilities	10	2,718,153,160	5,438,440,962
Other provisions	16	52,697,921,576	26,121,139,652
Total current liabilities		4,660,424,575,731	3,672,981,446,548
Non-current liabilities:			
Debentures	4, 10, 14	1,108,344,569,522	678,252,979,509
Long-term borrowings	4, 10, 14, 31	540,001,000,000	805,837,620,000
Long-term asset-backed loans	14	130,708,700,625	-
Long-term other payables	4, 10	18,412,515,411	23,339,486,919
Employee benefits liability	15	135,016,847,628	171,245,170,650
Deposits received	4, 10	176,625,399,392	178,737,374,555
Derivative financial liabilities	4, 9, 10	136,688,168,399	112,874,262,019
Firm commitment liabilities	9	27,131,278,426	13,500,267,179
Deferred income tax liabilities	28	154,829,330,713	20,289,875,220
Other provisions	16	113,560,510,097	126,851,795,383
Other non-current liabilities	4, 10	9,889,690,497	6,497,494,343
Total non-current liabilities		2,551,208,010,710	2,137,426,325,777
Total liabilities		7,211,632,586,441	5,810,407,772,325
Equity:			
Issued capital	1, 17	596,808,980,000	596,808,980,000
Capital surplus	18	1,258,336,538,553	1,256,235,542,460
Other components of equity	19	(78,272,893,123)	(77,156,735,344)
Accumulated other comprehensive income	6, 9, 10, 20	750,277,502,157	465,018,826,210
Retained earnings	21	1,946,841,492,840	2,499,681,921,997
Total equity		4,473,991,620,427	4,740,588,535,323
Total liabilities and equity		₩ 11,685,624,206,868	₩ 10,550,996,307,648

The accompanying notes are an integral part of the separate financial statements.

Doosan Heavy Industries & Construction Co., Ltd.
Separate statements of profit or loss
for the years ended December 31, 2015 and 2014

(Korean won in units)

	<u>Notes</u>	<u>2015</u>	<u>2014</u>
Continuing operations			
Revenue	22, 23, 32	₩ 5,146,293,601,154	₩ 5,496,792,932,857
Cost of sales	8, 24, 32	4,442,024,458,289	4,684,673,645,896
Gross profit		704,269,142,865	812,119,286,961
Selling and administrative expenses	24, 25	476,041,797,217	592,079,614,905
Operating profit		228,227,345,648	220,039,672,056
Finance income	26	793,829,373,842	617,451,092,546
Finance costs	26	933,643,923,636	827,705,376,721
Other non-operating income	27	17,296,317,250	25,692,994,470
Other non-operating expense	27	499,819,429,691	107,123,355,600
Loss before tax		(394,110,316,587)	(71,644,973,249)
Income tax expense (benefit)	28	57,035,746,974	(23,321,699,304)
Loss for the year		₩ (451,146,063,561)	₩ (48,323,273,945)
Earnings per share:			
Basic earnings per share	29	₩ (4,689)	₩ (613)
Diluted earnings per share	29	₩ (4,689)	₩ (613)

The accompanying notes are an integral part of the separate financial statements

Doosan Heavy Industries & Construction Co., Ltd.
Separate statements of comprehensive income or loss
for the years ended December 31, 2015 and 2014

(Korean won in units)

	<u>Notes</u>	<u>2015</u>	<u>2014</u>
Loss for the year		₩ (451,146,063,561)	₩ (48,323,273,945)
Other comprehensive income (loss)			
<i>Items that may not be reclassified to profit or loss in subsequent periods:</i>			
Remeasurement of the net defined benefit liabilities	15	(15,392,569,635)	(18,362,145,939)
Gain on revaluation of land	2, 12, 20	231,572,771,705	-
		<u>216,180,202,070</u>	<u>(18,362,145,939)</u>
<i>Items that may be reclassified to profit or loss in subsequent periods:</i>			
Net change in fair value of available-for-sale financial assets	6, 10, 20	(55,785,078)	(132,255,888)
Effective portion of changes in fair value of cash flow hedges	9, 10, 20	53,883,206,771	29,439,132,530
		<u>53,827,421,693</u>	<u>29,306,876,642</u>
Total comprehensive loss, net of tax		<u>₩ (181,138,439,798)</u>	<u>₩ (37,378,543,242)</u>

The accompanying notes are an integral part of the separate financial statements.

Doosan Heavy Industries & Construction Co., Ltd.
Separate statements of changes in equity
for the years ended December 31, 2015 and 2014
(Korean won in units)

	Issued capital	Capital surplus	Other components of equity	Accumulated other comprehensive income (loss)	Retained earnings	Total equity
As at January 1, 2014	₩ 530,791,280,000	₩ 945,768,544,626	₩ (76,004,141,815)	₩ 435,711,949,568	₩ 2,640,501,655,131	₩ 4,476,769,287,510
Loss for the year	-	-	-	-	(48,323,273,945)	(48,323,273,945)
Net change in fair value of available-for-sale financial assets	-	-	-	(132,255,888)	-	(132,255,888)
Effective portion of change in fair value of cash flow hedges	-	-	-	29,439,132,530	-	29,439,132,530
Remeasurement of the net defined benefit liability, net of tax	-	-	-	-	(18,362,145,939)	(18,362,145,939)
Total comprehensive income	-	-	-	29,306,876,642	(66,685,419,884)	(37,378,543,242)
Dividends	-	-	-	-	(74,134,313,250)	(74,134,313,250)
Increase in paid-in capital	66,017,700,000	306,661,174,818	-	-	-	372,678,874,818
Stock option	-	3,833,716,128	(1,152,593,529)	-	-	2,681,122,599
Others	-	(27,893,112)	-	-	-	(27,893,112)
As at December 31, 2014	₩ 596,808,980,000	₩ 1,256,235,542,460	₩ (77,156,735,344)	₩ 465,018,826,210	₩ 2,499,681,921,997	₩ 4,740,588,535,323
As at January 1, 2015	₩ 596,808,980,000	₩ 1,256,235,542,460	₩ (77,156,735,344)	₩ 465,018,826,210	₩ 2,499,681,921,997	₩ 4,740,588,535,323
Loss for the year	-	-	-	-	(451,146,063,561)	(451,146,063,561)
Net change in fair value of available-for-sale financial assets	-	-	-	(55,785,078)	-	(55,785,078)
Effective portion of change in fair value of cash flow hedges	-	-	-	53,883,206,771	-	53,883,206,771
Remeasurement of the net defined benefit liability, net of tax	-	-	-	-	(15,392,569,635)	(15,392,569,635)
Gain on revaluation of land	-	-	-	231,431,254,254	141,517,451	231,572,771,705
Total comprehensive income	-	-	-	285,258,675,947	(466,397,115,745)	(181,138,439,798)
Dividends	-	-	-	-	(86,443,313,412)	(86,443,313,412)
Stock option	-	2,100,996,093	(1,116,157,779)	-	-	984,838,314
As at December 31, 2015	₩ 596,808,980,000	₩ 1,258,336,538,553	₩ (78,272,893,123)	₩ 750,277,502,157	₩ 1,946,841,492,840	₩ 4,473,991,620,427

The accompanying notes are an integral part of the separate financial statements.

Doosan Heavy Industries & Construction Co., Ltd.
Separate statements of cash flows
For the years ended December 31, 2015 and 2014

(Korean won in units)

	Notes	2015	2014
Operating activities:			
Cash generated from operating activities :	33		
Loss for the year	₩	(451,146,063,561)	₩ (48,323,273,945)
Adjustments		873,626,541,606	575,288,999,917
Working capital adjustments		(527,328,624,048)	32,333,405,542
Interest received		2,583,125,097	9,551,202,362
Interest paid		(105,986,137,086)	(131,878,065,637)
Dividends received		5,423,254,417	4,416,153,527
Income taxes paid		(38,941,962,113)	(131,668,866,922)
Net cash flows provided by (used in) operating activities		(241,769,865,688)	309,719,554,844
Investing activities:			
Proceeds from disposal of short-term financial instruments		14,753,607,565	74,145,569,648
Proceeds from disposal of short-term investments in securities		7,000,000,000	-
Collection of short-term loans		2,883,819,440	12,372,000,000
Proceeds from disposal of long-term financial instruments		9,226,999,023	3,407,330,362
Proceeds from disposal of long-term investments in securities		2,529,431,988	4,039,726,903
Collection of long-term loans		3,437,415,261	3,051,154,000
Disposal of investments in subsidiaries, associates and joint ventures		-	6,474,033,289
Proceeds from disposal of property, plant and equipment		6,183,582,330	2,352,558,709
Proceeds from disposal of intangible assets		756,910,345	882,727,272
Disposal of non-current assets classified as held-for-sale		-	9,665,880,000
Acquisition of short-term financial instruments		(12,349,699,119)	(43,036,351,257)
Increase in short-term loans		(61,000,791,289)	(17,827,314,002)
Acquisition of long-term financial instruments		(751,248,991)	(1,123,646,597)
Acquisition of long-term investments in securities		(5,570,323,603)	(10,443,855,620)
Increase in long-term loans		(55,424,289,261)	(2,588,816,000)
Acquisition of investments in subsidiaries, associates and joint ventures		(6,318,365,903)	(136,538,695,000)
Acquisition of property, plant and equipment		(172,580,848,459)	(96,461,630,505)
Acquisition of intangible assets		(150,671,400,384)	(137,157,870,111)
Net cash flow used in investing activities		(417,895,201,057)	(328,787,198,909)
Financing activities:			
Increase in short-term borrowings, net		754,937,594,636	198,062,664,500
Issuance of debentures		531,774,846,930	189,549,500,000
Proceeds from long-term borrowings		518,620,000,000	762,218,000,000
Proceeds from asset-backed loans		32,879,881,289	-
Proceeds from long term asset-backed loans		130,708,700,625	-
Issuance of redeemable convertible preferred stock		-	372,678,874,818
Repayment of current portion of long-term debt		(761,627,963,604)	(1,217,085,703,027)
Repayment of long-term borrowings		(8,333,320,000)	(74,666,640,000)
Dividends paid		(86,443,313,412)	(74,134,313,250)
Net cash flows provided by financing activities		1,112,516,426,464	156,622,383,041
Other net increase in cash and cash equivalents:			
Net foreign exchange difference		6,483,029,440	2,640,961,235
Net increase in cash and cash equivalents		459,334,389,159	140,195,700,211
Cash and cash equivalents as at January 1		295,172,572,341	154,976,872,130
Cash and cash equivalents at December 31	₩	754,506,961,500	₩ 295,172,572,341

The accompanying notes are an integral part of the separate financial statements.

1. Corporate information

Doosan Heavy Industries & Construction Co., Ltd. (the "Company") was incorporated on September 20, 1962, with its headquarters in Changwon, Korea. As a power generation manufacturing company, the Company provides a variety of thermal and nuclear power generation equipment, including boilers, turbines, and generators. It also engages in engineering, procurement, and construction projects for thermal power plants. The Company also supplies seawater desalination and water treatment solutions to clients. In addition to the main domestic production facilities in Changwon, the Company operates a global network of production facilities including those in the United Kingdom, the Czech Republic, India, Romania, and Vietnam.

The Company was listed on the Korea Exchange on October 25, 2000 and its major stockholder as at December 31, 2015 is Doosan Corp. (holding 36.82% equity ownership).

2. Summary of significant accounting policies

2-1. Basis of preparation

The Company prepares statutory separate financial statements in the Korean language, which have been prepared in accordance with Korea International Financial Reporting Standards ("*KIFRS*") enacted by the *Corporate External Audit Law*. Pursuant to *KIFRS 1027*, the accompanying separate financial statements are accounted for, have been prepared on a historical cost basis, except for land and others which have been measured at fair value, and are presented in Korean won ("KRW") in units except for the accompanying notes to the separate financial statements.

The accompanying separate financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

Doosan Heavy Industries & Construction Co., Ltd. is the parent company of its subsidiaries (collectively referred to as the "Company") and the consolidated financial statements of the Company prepared in accordance with *KIFRS* have been issued separately.

2-2. New and amended standards and interpretations

The accounting policies adopted in the preparation of the separate financial statements are consistent with those followed in the preparation of the Company's separate financial statements for the year ended December 31, 2014, except for the adoption of new standards and interpretations 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.

KIFRS 1102 Share-based Payment

This amendment 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 Company has identified any performance and service conditions which are vesting conditions in previous periods.

- Performance conditions must include service conditions;
- Performance goals must be met during the period when services are rendered;
- Performance goals may be related to other activities of the Company;
- Performance conditions shall be market-based or non-market-based;
- If rendering services is suspended without any reasonable cause, performance conditions are not considered to be met.

2. Summary of significant accounting policies (cont'd)

2-2. New and amended standards and interpretations (cont'd)

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*. The amendment is applied prospectively and clarifies for the scope exceptions within *KIFRS 1103* that:

- Joint arrangements, not just joint ventures, are outside the scope of *KIFRS 1103*
- This scope exception applies only to the accounting in the financial statements of the joint arrangement itself.

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 Company has not applied the aggregation criteria in *KIFRS 1108.12*. The Company has presented the reconciliation of segment assets to total assets in previous periods and continues in this period's financial statements 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.

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. In previous periods, the Company has relied on *KIFRS 1103*, not *KIFRS 1040*, in determining whether an acquisition is of an asset or is a business acquisition.

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. The Company intends to adopt these standards, if applicable, when they become effective.

2. Summary of significant accounting policies (cont'd)

2-3. Investment in subsidiaries, associates and joint ventures

The Company has elected to use book value under previous accounting standards ("KGAAP") as deemed cost for subsidiaries, joint ventures and associates at the date of transition to *KIFRS*. After the date of transition, subsidiaries, joint ventures and associates are measured at cost. Dividends from subsidiaries, joint ventures and associates are recognized as income when the right to receive payment is established.

2-4. Foreign currencies

The Company's financial statements are presented in the currency of the primary economic environment in which it operates (its functional currency). The functional currency and the presentation currency for the separate financial statements of the Company are Korean Won. Transactions in currencies other than the Company's functional currency are recognized at the rates of exchange prevailing at the dates of the transactions. Foreign currency gain (loss) from settlements of foreign currency transactions or translation of monetary items denominated in foreign currencies are recognized in profit or loss whereas the gain (loss) from qualified cash flow hedge and net investment hedge for foreign operations is deferred as an equity item.

2-5. Cash and short-term deposits

Cash and cash equivalents include cash on hand, demand deposits, short-term, highly liquid investments with maturities (or date of redemption) of three months or less upon acquisition. Bank overdraft is classified as short-term borrowings on the separate statement of financial position.

2-6. Financial assets

Initial recognition and measurement

Financial assets are classified into the following specified categories: 'financial assets at fair value through profit or loss', 'loans and receivables', 'available-for-sale ("AFS") financial assets', 'held-to-maturity financial assets'. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

1) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss includes financial assets classified as held for trading financial assets and financial assets designated at financial assets at fair value through profit or loss upon initial recognition. A financial asset is classified as held for trading financial assets, if it has been acquired principally for the purpose of selling or repurchasing in near term. All derivative assets including an embedded derivative separated from the host contract and accounted for as derivative are classified as held for trading financial assets unless they are designated as effective hedging instruments. These categories of assets are classified as current assets or non-current assets depending on the timing of settlement.

2) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables, with maturities of more than 12 months from the end of the reporting year, are classified as non-current assets. Otherwise they are classified as current assets.

3) Available-for-sale financial investments

AFS financial investments are non-derivative financial assets that are designated as available for sale or are not classified as loans and receivables, held-to-maturity financial assets or financial assets at fair value through profit or loss. AFS financial investments are classified as non-current assets unless management has intention to sell them within 12 months from the end of the reporting year.

4) Held-to-maturity financial assets

Held-to-maturity financial assets are non-derivative financial instruments with fixed or determinable payments and fixed maturity that the Company has the positive intention and ability to hold to maturity. Held-to-maturity financial assets, with maturities of more than 12 months from the end of the reporting year, are classified as non-current assets. Otherwise they are classified as current assets.

2. Summary of significant accounting policies (cont'd)

2-6. Financial assets (cont'd)

Subsequent measurement

Financial assets are generally recognized on the trade date, which is the date the Company becomes a party to a contract to purchase or sale of a financial asset. Except for financial assets at fair value through profit or loss, all financial assets are initially measured at fair value, plus transaction costs. In the case of financial assets at fair value through profit or loss, they are initially measured at fair value and related transaction costs are recognized as expense in the separate statement of profit or loss.

Financial assets at fair value through profit or loss and AFS financial investments are subsequently measured at fair value. Loans and receivables and held-to-maturity financial assets are measured at amortized cost using the effective interest method ("EIR").

Gains or losses arising from changes in fair value of financial assets at fair value through profit or loss are recognized in the other non-operating income and expense line item in the separate statement of profit or loss. Dividends on financial assets at fair value through profit or loss are recognized in the finance income when the Company's right to receive the dividends is established.

Changes in fair value of monetary and non-monetary financial assets which are classified as AFS financial investments are recognized in other comprehensive income ("OCI") or loss. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the equity is reclassified into other non-operating income and expense in the statement of profit or loss.

Interest from AFS financial investments calculated using the EIR is recognized in finance income in the statement of profit or loss. Dividends on AFS equity instruments are recognized in the finance income when the Company's right to receive the dividends is established.

Impairment of financial assets

1) Financial assets carried at amortized cost

The Company assesses at the end of each reporting year whether there is any objective evidence that a financial asset is impaired. 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.

Impairment loss 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 at initial recognition. The carrying amount of the financial asset is reduced by the impairment loss and the amount of the loss is recognized in profit or loss. The Company measures impairment loss based on fair value of financial assets from observable market data.

If, in a subsequent year, 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 and recognized in profit or loss.

2) Available-for-sale financial investments

The Company assesses at the end of each reporting year whether there is any objective evidence that a financial asset or company of financial assets is impaired. For 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. If there is objective evidence of impairment on AFS financial investments, the cumulative loss that has been recognized in other comprehensive income or loss less any impairment loss previously recognized in profit or loss is reclassified from equity to profit or loss. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as AFS are not reversed through profit or loss. Meanwhile, if, in a subsequent year, the fair value of a debt instrument classified as AFS 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 through profit or loss.

2. Summary of significant accounting policies (cont'd)

2-6. Financial assets (cont'd)

Derecognition

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the financial asset expire, or when it transfers the rights to receive the contractual cash flows in a transaction in which all the risks and rewards of ownership of the financial asset are transferred.

Offsetting of financial instruments

Financial assets and financial liabilities are offset as a net amount in the separate statement of financial position when the Company has a legally enforceable right to set off the recognized amounts of the assets and liabilities and intends to settle on a net basis, or to realize the assets and the liabilities simultaneously.

2-7. Trade receivables

Trade receivables are amounts owed by customer for products and services provided in the ordinary course of business. Receivables expected to be collected within one year are classified as current assets. Otherwise they are classified as non-current assets. Trade receivables are initially measured at fair value and are presented as net of allowance for doubtful accounts, estimated on a individual basis based on past bad debt experience.

2-8. Due from customers for contract work and due to customers for contract work

The gross amount due from customers for contract work is the net amount of:

- (a) costs incurred, plus recognized profit, less
- (b) the sum of recognized losses and progress billings

for all contracts in progress for which costs are incurred, plus recognized profits (less recognized losses), in excess of progress billings. The costs incurred shall comprise costs that relate directly to the specific contract and costs that are attributable to contract activity in general and can be allocated to the contract, including fixed and variable overhead costs allocated based on the normal level.

If the costs incurred, plus recognized profit (or losses) exceeds progress billings, a due from customer amount is recognized as an asset; and if the progress billing exceeds the cost incurred, plus recognized profit (or losses), a due to customer amount is recognized as a liability.

2-9. Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of inventories includes fixed and variable manufacturing overhead costs which are systematically allocated to inventories by appropriate methods based on each category of inventory. The cost of inventories is determined by the specific identification method for finished goods, work-in-process, and materials in transit, and gross average method for all other inventories.

The Company periodically reviews changes in net realizable value of inventories (current replacement cost for raw materials) due to damage, obsolescence, decline in selling prices and others and recognizes loss on inventory valuation. Loss on inventory valuation is charged to cost of sales when it is ordinary and to other non-operating expense when it is extraordinary. When the circumstances that previously caused inventories to be written down below cost no longer exist and the new market value of inventories subsequently recovers, the valuation loss is reversed to the extent of the original valuation loss and the reversal is deducted from cost of sales.

2-10. Property, plant and equipment

Property, plant and equipment are stated at cost less subsequent accumulated depreciation and accumulated impairment losses. When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment. The cost of an item of property, plant and equipment includes expenditure that is directly attributable to the acquisition of the asset including the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

2. **Summary of significant accounting policies (cont'd)**

2-10. Property, plant and equipment (cont'd)

Subsequent costs incurred to replace part of previously recognized item of property, plant and equipment are added to the carrying amount of an asset, or recognized as a separate asset, if it is probable that future economic benefits associated with the assets will flow into the Company and the cost of an asset can be measured reliably. The carrying amount of what was replaced is derecognized. Routine maintenance and repairs are expensed as incurred.

Depreciation of property, plant and equipment is calculated to the cost of each asset less residual value using the straight-line method over the estimated useful lives of the assets as follows:

	Useful lives
Buildings	10~40 years
Structures	10~40 years
Machinery	5~20 years
Heavy equipment	10 years
Vehicles	5 years
Others	3~5 years

If a part of a property, plant and equipment has a cost that is significant in relation to the total cost property, plant and equipment, it is depreciated separately.

The Company reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting year. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

When the carrying amount of property, plant and equipment is higher than the recoverable amount, the carrying amount is adjusted to the recoverable amount and the difference is recognized as an impairment loss. Meanwhile, when the recoverable amount subsequently exceeds the carrying amount of the impaired asset, the excess is recorded as a reversal of impairment loss to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation, if no impairment loss had been recognized. Upon the derecognition of a property, plant and equipment, the difference between the net disposal proceed and carrying amount of the item is recognized in other non-operating income (expense).

A revaluation surplus is recorded in OCI and credited to the asset revaluation reserve in equity. However, to the extent that it reverses a revaluation deficit of the same asset previously recognized in profit or loss, the increase is recognized in profit and loss. A revaluation deficit is recognized in the statement of profit or loss, except to the extent that it offsets an existing surplus on the same asset recognized in the asset revaluation reserve.

2-11. Intangible assets

Intangible assets are initially measured at cost and are carried at cost less accumulated amortization and accumulated impairment losses. Subsequent expenditure on an intangible asset is capitalized only when it is probable that the expected future economic benefits that are attributable to the asset will increase.

Intangible assets other than goodwill and intangibles with indefinite useful lives are amortized on a straight-line basis over their estimated useful lives from the date that they are available for use. The estimated useful lives of the assets are as follows:

	Useful lives
Industrial property rights	5~10 years
Development costs	5 years
Others	5~20 years

2. Summary of significant accounting policies (cont'd)

2-11. Intangible assets (cont'd)

However, useful lives of certain trademarks and memberships, which are determined to be indefinite since there is no foreseeable limit to the year over which the assets are expected to generate net cash inflows for the Company, are not amortized but tested for impairment once a year.

Expenditures relating to development activities are capitalized when the result of the development is for the development of new products or substantial improvement of functions of existing products; there is technical and commercial feasibility of completing the development; and the Company has the ability to measure reliably the expenditure attributable to the development. Capitalized development cost include expenditure on materials, salaries, wages and other employment-related costs of personnel directly engaged in generating assets and related overhead cost which is systematically allocated. Capitalized development costs are presented at the acquisition cost less accumulated amortization and accumulated impairment losses. Capitalized development costs are amortized using the straight-line method over the estimated useful life and amortization expenses are included in cost of goods manufactured and amortization in selling and administrative expenses. The expenditure on research and development which does not meet conditions noted above is recognized as an expense when it is incurred.

The estimated useful life and amortization method for intangible assets with finite useful lives are reviewed at the end of each reporting year and for the assets which have been assessed as having indefinite useful life, that assessment is revisited each year, with the effect of any changes in estimate being accounted for as a change in accounting estimate.

2-12. Investment property

Investment properties are properties held to earn rentals and/or for capital appreciation. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, the book value of investment property is presented at the cost less accumulated depreciation and accumulated impairment.

While land is not depreciated, building is depreciated using the straight-line method over the useful lives between 30 and 40 years.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting year, with the effect of any changes in estimate being accounted for as a change in accounting estimate.

2-13. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial time to get ready for their intended use, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use.

2-14. Impairment of non-financial assets

Assets with indefinite useful lives such as goodwill are not amortized but tested for impairment annually. Assets which are amortized or depreciated are tested for impairment to determine whether events and circumstances indicating those assets have suffered impairment exist. Impairment loss is the excess of the carrying amount over recoverable amount. Recoverable amount is the higher of fair value less costs to sell and value in use. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. When 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 company of cash-generating units for which a reasonable and consistent allocation basis can be identified. Except for goodwill, all non-financial assets that have incurred impairment are tested for reversal of impairment at the end of each reporting year.

2. Summary of significant accounting policies (cont'd)

2-15. Borrowings

Borrowings are measured initially at fair value, net of transaction costs and subsequently at amortized cost using the effective interest method, with interest expense being recognized on an effective yield basis. The difference between the amount received and the redemption amount is amortized using the effective interest method and recognized in profit or loss. Borrowings are classified as non-current liabilities when the Company has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting year. Otherwise borrowings are classified as current liabilities.

2-16. Compound financial instruments

Compound financial instruments issued by the Company are classified as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement and the definitions of a financial liability and an equity instrument. The conversion right of convertible bonds and stock warranties embedded in compound financial instrument issued by the Company which can, at the option of the holder, be converted into a fixed number of equity instruments in the Company, is classified as equity.

The liability component of a convertible bonds and bonds with stock warranties is recognized at the fair value of a similar liability on initial recognition and be measured in amortized cost by the (EIR) until it is extinguished. The equity component is measured by deducting the fair value of the financial liability from the fair value of the compound financial instrument as a whole on initial recognition. Any tax effect is reflected and the instrument is not remeasured afterward.

The conversion right that is an embedded derivative is recognized at the market value of a similar derivative or as the fair value derived from an appropriate valuation model. Subsequent changes in fair value of the conversion right are recognized as income or expense in profit or loss.

2-17. Financial guarantee contracts

The Company has financial guarantee contract liabilities, which are obligations to pay specific amounts for indemnifying creditors' loss on insolvency of specific debtors according to initial and revised contract provisions of liabilities on the payment date. Financial guarantee contract liabilities are initially measured at their fair value less the direct transaction cost relating to the issuance. Subsequently, financial guarantee contract liabilities are measured at the higher of the amount of the obligations under the contract, as determined in accordance with *KIFRS 1037 Provisions, Contingent Liabilities and Contingent Assets*, and the amount initially recognized is less cumulative amortizations recognized in accordance with the *KIFRS 1018 Revenue*.

2-18. Employee benefits liability

The Company operates a defined benefit plan, and generally makes contributions calculated based on periodic actuarial calculations to separately administered funds such as qualifying insurance companies or trust funds.

Defined benefit plans are post-employment benefit plans other than defined contribution plans. Generally, under the defined benefit plan, amounts to be paid as retirement benefits are determined by reference to a formula usually based on employees' earnings, years of service, ages and other considerations. The retirement benefit obligation recognized in the statement of financial position represents the present value of the defined benefit obligation, less fair value of plan assets and adjustments for unrecognized past service cost. The defined benefit obligation is calculated by an independent actuary using the projected unit credit method. The present value of the defined benefit obligation is denominated in the same currency in which the benefits are expected to be paid, and calculated at the discount rate which is the yield at the reporting date on high quality corporate bonds that have maturity dates approximating the terms of the Company's obligation.

Actuarial gain or loss from changes in actuarial assumptions or differences between actuarial assumptions and actual results is recognized in other comprehensive income or loss, which is immediately reflected in retained earnings. Past service cost is directly recognized in profit or loss in the year of the plan amendment or curtailment occurs.

2. Summary of significant accounting policies (cont'd)

2-19. Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that the Company will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. A provision is measured using the present value of the cash flows estimated to settle the present obligation when the effect of the time value of money is material.

At the end of each reporting year, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. The increase in provision due to passage of time is recognized as interest expense. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the year. 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. In this case, any income arising from the third party reimbursement is netted off against the related expense to be recognized in the statement of profit or loss from the recognition of provisions.

2-20. Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

2-21. Derivative financial instruments and hedge accounting

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 year. The resulting gain or loss is generally recognized as profit or loss when it is incurred. However, 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 or loss. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss.

1) Hedge accounting

The Company operates fair value hedges to avoid the risk of fair value change, which is incurred from specific risk on assets, liabilities and firm contracts, and cash flow hedges to avoid the risk of future cash flow change, which is incurred from specific risk on expecting contracts.

At the inception of the hedge relationship, the Company 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 Company assesses whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item.

Fair value hedges

Changes in the fair value of derivatives that are designated and qualified as fair value hedges (or gain or loss on foreign currency translation, when a financial instrument, not derivative is designated as the hedging instrument) are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

Cash flow hedges

The effective portion of change in the fair value of derivatives that are designated and qualify as cash flow hedges for decreasing risk incurred from change of future cash flow on forecast transaction is recognized in other comprehensive income or loss. Amounts previously recognized in other comprehensive income or loss and accumulated in equity are reclassified to profit or loss in the years when the hedged item is recognized in profit or loss, or is reflected in the carrying amount of the associated asset or liability when the forecasted transaction occurs. Even when hedge accounting is discontinued due to the expiration, termination or exercise of hedging instrument, subsequent accounting treatment of amounts recognized in other comprehensive income or loss and accumulated in equity is the same. However, when hedge accounting is discontinued due to forecast transaction being no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

2. **Summary of significant accounting policies (cont'd)**

2-21. Derivative financial instruments and hedge accounting (cont'd)

2) Separable embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the following criteria has been met: (a) the economic characteristics and risks of the host contract and the embedded derivatives are not clearly and closely related to a separate instrument with the same terms as the embedded derivative that would meet the definition of a derivative, and (b) the hybrid (combined) instrument is not measured at fair value through profit or loss. Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

3) Other derivative financial instruments

Derivative financial instruments other than the effective portion of derivative financial instruments that are designated as the hedging instruments are measured at fair value. Gain or loss arising from changes in fair value is recognized in profit or loss.

2-22. Dividend

Dividend payable is recognized as liability when declaration of the dividend is approved in the shareholders' meeting.

2-23. Issued capital

Common shares are classified as equity and the incremental costs directly arising from capital transactions, net of tax are deducted from equity. Preferred shares are classified as equity only if the preferred shares are not redeemable or redeemable solely upon the Company's decision or the distribution of dividends is solely upon the Company's decision. For those preferred shares, once when the general meeting of shareholders meeting declares dividends, the Company recognizes the dividend liability accordingly.

The equity instruments that are reacquired by the Company (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

2-24. Share-based payments

The Company measures the cost of share options granted to employees by reference to the estimated fair value of at the date at which they are granted. The share-based payment expenses are recognized on a straight-line basis over the vesting year reflecting expected forfeiture rate. The Company determines the fair value of share option using the Black-Scholes option pricing model.

2-25. Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable for the sale of goods and rendering of services arising in the course of the ordinary activities of the Company. Revenue is reduced for value added tax, estimated customer returns, rebates and trade discounts and is presented after eliminating intercompany transactions. The Company recognizes revenue when the amount of revenue can be measured reliably and it is probable that the economic benefits associated with the transaction will flow to the Company and when transaction meets the revenue recognition criteria specified by activity. When measuring revenue, the Company reliably estimates on contingencies related to sales based on historical data such as customer type, transaction type and trading terms.

Sale of goods

Revenue from the sale of goods is recognized when the Company has transferred to the buyer the significant risks and rewards of ownership of the goods. Revenue is recognized on initial delivery of the goods net of expected discounts and returns estimated based on historical data. The Company estimates and recognizes provision for warranty and sales return arising from sale of goods.

Rendering of services

If the outcome of a contract can be reliably measured, contract revenue and contract cost associated with the construction contract are recognized by reference to the stage of completion of the contract activity at the end of the reporting year. The stage of completion of the contract is assessed by reference to the proportion of the actual contract costs incurred to the costs to complete the contract. Should the construction contract expect to incur loss (total contract cost exceeds total contract revenue), such loss is

2. **Summary of significant accounting policies (cont'd)**

2-25. Revenue recognition (cont'd)

immediately recognized in profit or loss. Revenue from service transactions other than a construction contract is recognized by using percentage of completion method.

Other income

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreement. Revenues arising from dividends are recognized when the right to receive the dividend payment is established. Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is recognized using the effective interest method. Lease income is accounted for on a straight-line basis over the lease terms.

2-26. Government grants

Government grants that are earmarked for the acquisition of assets are recognized as a deduction from the acquisition cost of the received assets or other assets for temporarily investing received assets before the intended assets are acquired. When the intended assets are acquired, they are recorded as a deduction from the acquisition cost.

Government grants that have no specific condition for their use are recognized in operating income when it is directly related to primary operations. If not, government grants are recognized in other non-operating income. If there are specific expenses related to government grants, the Company offsets the income from government grants with such expenses and recognizes the net amount in profit or loss.

2-27. Taxes and deferred tax

Income tax expense is composed of current and deferred tax. Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or loss or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or loss or directly in equity, respectively.

Income tax (current tax) expense is the sum of corporate tax for each fiscal year and tax added to corporate tax under corporate income tax law and other applicable laws. Additional income taxes or tax refunds for the prior years are included in income tax expense for the current year when recognized. 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 year.

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable income. Deferred tax assets and liabilities are not recognized if the temporary difference arises 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 assets and liabilities are measured at the tax rates that are expected to apply in the year 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 year. A deferred tax liability for the temporary differences associated with investments in subsidiaries, associate and joint venture has not been recognized in the separate financial statements, since it is not expected to be realized.

The carrying amount of deferred tax assets is reviewed at the end of each reporting year 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.

2-28. Non-current assets held for sale

Non-current assets and disposal companies are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. Non-current assets (and disposal companies) classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell and are no longer depreciated or amortized.

2. **Summary of significant accounting policies (cont'd)**

2-28. Non-current assets held for sale (cont'd)

If the fair value less costs to sell of the non-current assets held-for-sale (and disposal companies) decrease, impairment loss is recognized immediately in profit or loss. A gain should be recognized for any subsequent increase in fair value less costs to sell of an asset, but not in excess of the cumulative impairment loss previously recognized.

2-29. Greenhouse gas emissions

The Company receives free emission rights as a result of emission trading schemes. The rights are received on an annual basis and, in return, the Company is required to remit rights equal to its actual emissions. The Company has adopted the net liability approach to the emission rights granted. Therefore, a provision is recognized only when actual emissions exceed the emission rights granted and still held. The emission costs are recognized as other operating costs. Where emission rights are purchased from other parties, they are recorded at cost, and treated as a reimbursement right, whereby they are matched to the emission liabilities and re-measured to fair value. The changes in fair value are recognized in the statement of profit or loss and other comprehensive income.

2-30. 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 Company'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.

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 years 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 years beginning on or after January 1, 2016, with early adoption permitted.

2. Summary of significant accounting policies (cont'd)

2-30. Standards issued but not yet effective (cont'd)

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 years 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.

Amendments to KIFRS 1001 Disclosure Initiative

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.

3. Significant accounting estimates and assumptions

The estimates and underlying assumptions are reviewed on an ongoing basis. The estimates and underlying assumptions are based on historical experiences and other factors including expectation on possible future events. Actual results may differ from these estimates. The following are critical assumptions and key sources of estimation uncertainty at the end of reporting year that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Revenue recognition based on percentage of completion

Revenue for construction contracts is recognized using the percentage-of-completion method, under which revenue is recognized as work progresses in the ratio of actual costs incurred to estimated total costs. Any changes in the early stages of long-term projects, in the scope and costs of project implementation in the construction year, and in construction plans may have a significant effect on the amount of revenue recognized.

Employee benefit liability

The Company operates a defined benefit plan. Defined benefit liability is calculated by annual actuarial valuations as at the reporting date. In order to perform the actuarial valuations, assumptions for discount rates, future salary increases and others are required to be estimated.

3. Significant accounting estimates and assumptions (cont'd)

Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. In accordance with the relevant laws and practices, the estimated amounts may change to allow for additional provisions to be recognized in future years.

Deferred tax

Recognition and measurement of deferred tax assets and liabilities requires judgment of the Company's management. Especially, the range of recognized and whether to be recognized are influenced by assumptions about future circumstances and judgment of management.

Impairment of non-financial assets

Impairment exists when the carrying value of an asset or cash generating unit (CGU) exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs of disposal calculation is based on available data from binding sales transactions, conducted at arm's length, for similar assets or observable market prices less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow (DCF) model. The cash flows are derived from the budget for the next five years and do not include restructuring activities that the Company is not yet committed to or significant future investments that will enhance the asset's performance of the CGU being tested. The recoverable amount is sensitive to the discount rate used for the DCF model as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. The key assumptions used to determine the recoverable amount for the different CGUs.

4. Financial risk management

The Company is exposed to various financial risks such as market risk, credit risk and liquidity risk relating to its operations. The objective of the Company's risk management policy is to improve financial structure and enhance the efficiency of treasury operations for sustainable business performance.

Financial risk management activities are performed by the Company's treasury department in accordance with risk management policies. In addition, the Company monitors financial risks regularly to minimize the effect from such relevant risks.

Market risk

(1) Foreign currency risk

The Company's exposure to the risk of changes in foreign exchange rates relates primarily to the Company's operating activities and net investments in foreign subsidiaries. The Company's objective of foreign currency risk management is to minimize uncertainty and volatility arising from fluctuations in foreign currency exchange rates. Foreign currency risk is managed in accordance to the Company's policy on foreign currencies, and currency trading for speculative purposes is prohibited.

The Company manages foreign currency risk by matching the inflow and the outflow of foreign currencies (natural hedges) and by using currency derivatives, such as currency forwards, for the remaining exposure. The Company's book value of financial assets and liabilities denominated in foreign currencies as at December 31, 2015 and 2014 is as follows (Korean won in millions):

	2015						Total
	USD	EUR	JPY	GBP	Others (*1)		
I. Financial assets	₩ 387,699	₩ 16,690	₩ 3,700	₩ 11,729	₩ 137,853	₩ 557,671	
II. Financial liabilities	433,305	122,666	50,936	16,120	62,396	685,423	
Net (I - II)	₩ (45,606)	₩ (105,976)	₩ (47,236)	₩ (4,391)	₩ 75,457	₩ (127,752)	

(*1) Others are translated into Korean won in millions from foreign currencies except for USD, EUR, JPY and GBP.

4. Financial risk management (cont'd)

Market risk (cont'd)

	2014					
	USD	EUR	JPY	GBP	Others (*1)	Total
I. Financial assets	₩ 215,458	₩ 7,927	₩ 2,030	₩ 6,855	₩ 103,259	₩ 335,529
II. Financial liabilities	312,775	165,366	56,537	10,327	30,552	575,557
Net (I - II)	₩ (97,317)	₩ (157,439)	₩ (54,507)	₩ (3,472)	₩ 72,707	₩ (240,028)

(*1) Others are translated into Korean won in millions from foreign currencies except for USD, EUR, JPY and GBP.

The following table demonstrates the sensitivity of 10% fluctuation in foreign currency exchange rates, with all other variables held constant, on the Company's profit (loss) before tax for the years ended December 31, 2015 and 2014 (Korean won in millions):

	2015		2014	
	10% increase	10% decrease	10% increase	10% decrease
Profit (loss) before tax	₩ (12,775)	₩ 12,775	₩ (24,003)	₩ 24,003

The above sensitivity analysis is for financial assets and liabilities denominated in foreign currencies as at December 31, 2015 and 2014.

(2) Interest rate risk

Interest rate risk is the risk of fluctuations in interest rates, which mainly occur in floating rate deposits and borrowings. The objective of interest rate risk management is to minimize the financial costs and uncertainty associated with interest rate changes.

The Company utilizes internally reserved funds to minimize external borrowings, improve the structure of short-term and long-term borrowings, maintain optimal levels of floating rate borrowings compared to fixed rate borrowings, and regularly monitor trends in domestic and overseas interest rate movements in order to manage such risk.

Floating rate financial assets and liabilities exposed to interest rate risk as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Financial assets	₩ 509,200	₩ 120,500
Financial liabilities	1,186,600	214,880
Net	₩ (677,400)	₩ (94,380)

Assuming all other variables are held constant, the effect of a 100 basis point (bp) change in interest rates on profit (loss) before tax for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
	100 bp increase	100 bp decrease	100 bp increase	100 bp decrease
Profit (loss) before tax	₩ (6,774)	₩ 6,774	₩ (944)	₩ 944

4. Financial risk management (cont'd)

Market risk (cont'd)

(3) Other market price risk

The Company is exposed to market price risk arising from changes in the fair value or future cash flows of financial investments, especially equity instruments listed on stock exchanges. The Company assesses market price risk on a regular basis. Significant investments within a portfolio individually managed and all decisions related to the purchase and disposal of such investments are approved by the Board of Directors.

Credit risk

The Company is exposed to credit risk, which is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. Credit risk arises from trade and other receivables, held-for-sale financial assets except for equity instruments, deposits in financial institutions, derivative instruments and financial guarantee contracts.

The Company enters into transactions with customers having met a certain level of credit quality and maintains policies and procedures on financial assets to manage such risks. The credit quality of a new customer is assessed based on publicly announced financial information and the information provided by credit rating agencies; and such assessment is used as a basis for determining customer's credit limit. Furthermore, collaterals and credit guarantee are obtained as security, if necessary. In addition, the Company yearly reassesses the credit quality of customers by reviewing credit limits and adjusts the amount covered by collaterals when deemed necessary. The Company also monitors whether the collection of financial assets have been impaired to take relevant actions.

Maximum exposure to credit risks will be the book value of financial assets is as follows (Korean won in millions):

	Description	2015	2014
Loans and other receivables	Cash and cash equivalents	₩ 754,507	₩ 295,172
	Short and long-term financial assets	85,169	97,879
	Trade receivables and other receivables	1,004,458	977,369
	Deposits	66,677	67,648
Held-to-maturity financial assets		3,100	10,100
Available-for-sale financial assets (excluding equity securities)		7	7
Derivative financial assets		64,295	41,047
		<u>₩ 1,978,213</u>	<u>₩ 1,489,222</u>

In addition to the above financial instruments, the maximum guarantee amounts based on the Company's payment guarantee contracts are described in Note 30.

The aging analysis of trade and other receivables as at December 31, 2015 and 2014 is as follows (Korean won in millions):

	2015					Total
	Before maturity	0~3 months	3~6 months	6~12 months	More than 12 months	
Trade receivables	₩ 342,303	₩ 112,310	₩ 46,177	₩ 43,553	₩ 634,046	₩ 1,178,389
Loans and other receivables	455,718	-	-	-	37,624	493,342
Accrued income	3,272	-	-	1,698	12,550	17,520
	<u>₩ 801,293</u>	<u>₩ 112,310</u>	<u>₩ 46,177</u>	<u>₩ 45,251</u>	<u>₩ 684,220</u>	<u>₩ 1,689,251</u>

4. Financial risk management (cont'd)

Credit risk (cont'd)

	2014					
	Before maturity	0~3 months	3~6 months	6~12 months	More than 12 months	Total
Trade receivables	₩ 317,731	₩ 57,331	₩ 25,826	₩ 17,195	₩ 690,240	₩ 1,108,323
Loans and other receivables	308,328	-	-	3	49,125	357,456
Accrued income	4,301	577	2,961	2,267	12,198	22,304
	<u>₩ 630,360</u>	<u>₩ 57,908</u>	<u>₩ 28,787</u>	<u>₩ 19,465</u>	<u>₩ 751,563</u>	<u>₩ 1,488,083</u>

An allowance is recognized by applying appropriate allowance rates for receivables that can be assessed to be impaired individually due to insolvency, bankruptcy and others. A company of financial assets that are not individually significant and have similar credit risk characteristics are assessed for impairment on a collective basis based on aging analysis and the Company's past experience of receivables collection. Available-for-sale financial assets, held-to-maturity financial assets, deposits in financial institutions and derivative instruments are individually assessed for impairment.

Liquidity risk

The Company is exposed to liquidity risk, which is the risk that it will encounter difficulties in fulfilling the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset.

The Company manages liquidity risk by matching the duration of financial assets and liabilities through estimating future cash flows from its operating, investing and financing activities, and securing moderate levels of liquidity in advance. The maturity profiles of the Company's major financial liabilities based on contractual amounts as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	Book value	Total	Less than 1 year	2 years or less	5 years or less	More than 5 years
Principal	₩ 5,636,560	₩ 5,632,721	₩ 3,640,959	₩ 931,098	₩ 1,046,549	₩ 14,115
Interest	-	175,725	86,500	40,473	48,277	475
	<u>₩ 5,636,560</u>	<u>₩ 5,808,446</u>	<u>₩ 3,727,459</u>	<u>₩ 971,571</u>	<u>₩ 1,094,826</u>	<u>₩ 14,590</u>

	2014					
	Book value	Total	Less than 1 year	2 years or less	5 years or less	More than 5 years
Principal	₩ 4,266,014	₩ 4,267,016	₩ 2,590,264	₩ 1,076,873	₩ 588,088	₩ 11,791
Interest	-	163,000	78,977	60,407	22,846	770
	<u>₩ 4,266,014</u>	<u>₩ 4,430,016</u>	<u>₩ 2,669,241</u>	<u>₩ 1,137,280</u>	<u>₩ 610,934</u>	<u>₩ 12,561</u>

The contractual amounts of financial liabilities in the above tables are calculated basis on non-discounted cash flows (including interest expense) and differ from its book values. Besides the above non-derivative liabilities, the maximum guarantee amounts based on financial guarantee contracts provided by the Company as at December 31, 2015 are described in Note 30.

Capital risk management

The objective of the Company'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 Company 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 and net borrowings-to-equity ratio is calculated by dividing net borrowings by total equity. Net borrowings are calculated by deducting cash and cash equivalents, short and long term finance instruments from total borrowings.

4. Financial risk management (cont'd)

Capital risk management (cont'd)

The Company's debt-to-equity ratio and net borrowings-to-equity ratio as at December 31, 2015 and 2014 is as follows (Korean won in millions, except debt-to-equity ratio):

	2015		2014	
Total liability	₩	7,211,633	₩	5,810,408
Total equity		4,473,992		4,740,589
Debt-to-equity ratio		161.19%		122.57%
Cash and cash equivalents and short and long-term financial instruments	₩	839,676	₩	393,051
Total borrowings		4,025,300		2,749,949
Net borrowings		3,185,624		2,356,898
Net borrowings-to-equity ratio		71.20%		49.72%

5. Restricted financial instruments

Restricted financial instruments as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014		Restrictions
Short-term financial instruments	₩	9,686	₩	12,224	Government R&D projects and others (*1)
		4,956		4,900	Advanced receipts from contractors (*2)
		50,444		-	Mutual Growth Fund
Long-term financial instruments		3		3	Deposits for maintenance of checking accounts
		10		52,766	Security deposits for maintenance of checking accounts
		584		-	Reserves for repayments related to asset-backed loans
Deposits	₩	65,683	₩	69,893	

(*1) The deposits are restricted in use and may only be used for specific national R&D projects

(*2) The deposits are restricted in use and to be used for designated construction projects

6. Short and long-term investments in securities

Short and long-term investments in securities as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Description	2015	2014
Short-term investments in securities	Held-to-maturity financial assets	₩ -	₩ 7,000
Long-term investments in securities	Available-for-sale financial assets	47,980	44,130
	Held-to-maturity financial assets	3,100	3,100
		51,080	47,230
		₩ 51,080	₩ 54,230

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6. Short and long-term investments in securities (cont'd)

Available-for-sale financial assets as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Description	2015(*1)	2014
Marketable equity securities	HTC Purenergy Inc	₩ 205	₩ 275
Non-marketable equity securities	Incheon-Kimpo Expressway Co., Ltd.	14,240	14,240
	Hwaseong City Expressway Co., Ltd.	9,578	6,859
	Others	713	583
		<u>24,531</u>	<u>21,682</u>
Other equity investments	Lanco Kondapalli Power Ltd.	12,050	12,050
	Machinery Financial Cooperative	4,000	4,000
	Construction Guarantee Cooperative	2,138	2,138
	Korea Finance Corporation Neoplux 2010-7	1,955	3,735
	Others	3,094	243
		<u>23,237</u>	<u>22,166</u>
Government and public bonds	Regional development bonds and others	7	7
		<u>₩ 47,980</u>	<u>₩ 44,130</u>

(*1) Parts of available-for-sale financial assets have been pledged as collateral for developers' project financing (See Note 31).

Non-marketable equity securities and other equity investments are accounted for as acquisition cost, as there is no active market and fair value cannot be reliably measured and reviewed at the end of each reporting date.

Change in fair value of available-for-sale financial assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	January 1	Valuation	December 31
Marketable equity securities	₩ (4,959)	₩ (74)	₩ (5,033)
Tax effect	1,200	18	1,218
	<u>₩ (3,759)</u>	<u>₩ (56)</u>	<u>₩ (3,815)</u>
	2014		
	January 1	Valuation	December 31
Marketable equity securities	₩ (4,785)	₩ (174)	₩ (4,959)
Tax effect	1,158	42	1,200
	<u>₩ (3,627)</u>	<u>₩ (132)</u>	<u>₩ (3,759)</u>

Held-to-maturity financial assets as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
	Current	Non-current	Current	Non-current
Other debt securities	₩ -	₩ 3,100	₩ 7,000	₩ 3,100

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7. Trade and other receivables

Trade and other receivables as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 1,175,024	₩ (411,448)	₩ 763,576
Other receivables	199,337	(46,877)	152,460
Accrued income	17,520	(9,906)	7,614
Short-term loans	140,489	(123,562)	16,927
	<u>1,532,370</u>	<u>(591,793)</u>	<u>940,577</u>
Non-current assets:			
Long-term trade receivables	3,365	-	3,365
Long-term loans	153,516	(93,000)	60,516
	<u>156,881</u>	<u>(93,000)</u>	<u>63,881</u>
	<u>₩ 1,689,251</u>	<u>₩ (684,793)</u>	<u>₩ 1,004,458</u>
	2014		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 1,105,167	₩ (360,446)	₩ 744,721
Other receivables	173,240	(39,464)	133,776
Accrued income	22,304	-	22,304
Short-term loans	82,373	(64,304)	18,069
	<u>1,383,084</u>	<u>(464,214)</u>	<u>918,870</u>
Non-current assets:			
Long-term trade receivables	3,156	-	3,156
Long-term loans	101,843	(46,500)	55,343
	<u>104,999</u>	<u>(46,500)</u>	<u>58,499</u>
	<u>₩ 1,488,083</u>	<u>₩ (510,714)</u>	<u>₩ 977,369</u>

7. Trade and other receivables (cont'd)

Changes in allowance for doubtful accounts for the years ended December 31, 2015 and 2014 are summarized as follows (Korean won in millions):

	2015			
	Balance at January 1	Provision for (reversal of) allowance	Write-off	Balance at December 31
Trade receivables and other receivables :				
Trade receivables	₩ 360,446	₩ 51,002	₩ -	₩ 411,448
Other receivables	39,464	7,444	(31)	46,877
Accrued income	-	9,906	-	9,906
Short-term and long-term loans	110,804	105,758	-	216,562
	<u>510,714</u>	<u>174,110</u>	<u>(31)</u>	<u>684,793</u>
Other :				
Due from customers for contract work	42,638	1,910	-	44,548
Deposits	1,359	(182)	(900)	277
Prepayments	331	-	-	331
Other non-current assets	-	5,970	(5,970)	-
	<u>44,328</u>	<u>7,698</u>	<u>(6,870)</u>	<u>45,156</u>
	<u>₩ 555,042</u>	<u>₩ 181,808</u>	<u>₩ (6,901)</u>	<u>₩ 729,949</u>
	2014			
	Balance at January 1	Provision for (reversal of) allowance	Write-off	Balance at December 31
Trade receivables and other receivables :				
Trade receivables	₩ 282,617	₩ 77,829	₩ -	₩ 360,446
Other receivables	38,801	663	-	39,464
Accrued income	2,258	(2,258)	-	-
Short-term and long-term loans	93,946	16,858	-	110,804
	<u>417,622</u>	<u>93,092</u>	<u>-</u>	<u>510,714</u>
Other :				
Due from customers for contract work	37,790	4,848	-	42,638
Deposits	1,359	-	-	1,359
Prepayments	2,939	-	(2,608)	331
	<u>42,088</u>	<u>4,848</u>	<u>(2,608)</u>	<u>44,328</u>
	<u>₩ 459,710</u>	<u>₩ 97,940</u>	<u>₩ (2,608)</u>	<u>₩ 555,042</u>

The Company deems trade and other receivables that are overdue as impaired. An allowance for doubtful account is individually recognized for receivables that can be assessed individually for impairment. An allowance for doubtful account is recognized based on the aging analysis and the Company's past collection experience for the company of receivables that are not individually significant and have similar characteristics. Provision for doubtful accounts is included in selling and administrative expenses and other non-operating expenses in the statement of profit or loss.

8. Inventories

Inventories as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Acquisition cost	Provision for loss on valuation	Carrying amounts
Finished goods	₩ 17,871	₩ (6,547)	₩ 11,324
Work-in-process	194,348	-	194,348
Raw materials	29,018	(823)	28,195
Supplies	19,618	-	19,618
Materials-in-transit	53,747	-	53,747
	₩ 314,602	₩ (7,370)	₩ 307,232

	2014		
	Acquisition cost	Provision for loss on valuation	Carrying amounts
Finished goods	₩ 16,361	₩ (4,626)	₩ 11,735
Work-in-process	206,582	-	206,582
Raw materials	36,822	(1,024)	35,798
Supplies	16,639	-	16,639
Materials-in-transit	60,014	-	60,014
	₩ 336,418	₩ (5,650)	₩ 330,768

Loss on valuation of inventories amounting to ₩1,720 million and reversal of loss on valuation of inventories amounting to ₩410 million were recognized and adjusted in cost of sales for the years ended December 31, 2015 and 2014, respectively.

9. Derivative financial instruments

9-1. Derivative financial instruments as at December 31, 2015 and 2014 are summarized as follows (Korean won in millions and USD, EUR and JPY in thousands):

				2015					
		Buy	Sell	Derivative financial assets (liabilities)	Gain (loss) on valuation of derivative financial instruments	Accumulated other comprehensi ve income (loss) (*1)	Firm commitment asset (liabilities) (*2)		
Foreign currency forward	KRW	4,731,493	USD 4,248,441	₩ (239,696)	₩ (221,352)	₩ (14,193)	₩ 90,354		
	KRW	109,836	EUR 83,624	1,341	672	3,523	(76)		
	KRW	257,857	JPY 24,461,934	6,051	(7,848)	(177)	(3,885)		
	KRW	57,458	Others	(1,482)	(242)	(1,239)	142		
	USD	2,271,565	KRW 2,563,584	80,163	78,084	42,702	(19,061)		
	EUR	344,648	KRW 464,024	(14,287)	(4,455)	(4,999)	114		
	JPY	29,201,574	KRW 337,724	(35,143)	2,295	(8,735)	(19)		
		Others	KRW 146,187	1,781	(923)	2,815	-		
Long-term borrowing denominated in foreign currencies (*3)	KRW	210,710	USD 200,000	-	-	-	23,690		
Embedded derivatives and others (*4)				(447)	39,412	-	-		
				(201,719)	(114,357)	19,697	91,259		
Tax effect				-	-	(4,767)	-		
				₩ (201,719)	₩ (114,357)	₩ 14,930	₩ 91,259		

(*1) In consideration of the amounts adjusted in revenue, the effective portion of changes in fair value of cash flow hedges amounting to ₩14,930 million, net of tax, was recognized in accumulated other comprehensive income or loss.

(*2) In consideration of the amounts adjusted in revenue, firm commitment assets of ₩122,442 million and firm commitment liabilities of ₩31,183 million were recognized in the separate statements of financial position by applying a fair value hedge accounting.

(*3) The Company designated its long-term borrowings denominated in foreign currencies as hedging instruments to hedge the fair value of firm commitments.

(*4) Represents amounts related to exchange rights on exchangeable bonds issued by the Company and valuation of the share purchase contract between the Company and the investor of redeemable convertible preferred stock issued by Doosan Engineering & Construction Co., Ltd. ("DEC").

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9. Derivative financial instruments (cont'd)

				2014					
		Buy	Sell	Derivative financial assets (liabilities)	Gain (loss) on valuation of derivative financial instruments	Accumulated other comprehensi ve income (loss) (*1)	Firm commitment asset (liabilities) (*2)		
Foreign currency forward	KRW	4,486,738	USD 4,109,091	₩ (50,846)	₩ (90,729)	₩ (5,162)	₩ 8,785		
	KRW	116,828	EUR 81,618	6,331	1,283	6,741	(719)		
	KRW	301,941	JPY 28,539,929	23,479	20,384	15,686	(19,431)		
	KRW	56,473	Others	2,967	397	325	(2,629)		
	USD	2,327,164	KRW 2,577,405	(9,066)	33,424	8,679	(17,409)		
	EUR	259,306	KRW 372,950	(19,454)	(5,460)	(14,437)	407		
	JPY	37,655,259	KRW 461,247	(92,980)	(19,333)	(61,584)	4,516		
		Others	KRW 79,025	(3,394)	(1,198)	(1,637)	1,459		
Long-term borrowing denominated in foreign currencies (*3)	KRW	152,160	USD 150,000	-	-	-	12,720		
Embedded derivatives and others (*4)				(39,860)	(73,084)	-	-		
				<u>(182,823)</u>	<u>(134,316)</u>	<u>(51,389)</u>	<u>(12,301)</u>		
Tax effect				-	-	12,436	-		
				<u>₩ (182,823)</u>	<u>₩ (134,316)</u>	<u>₩ (38,953)</u>	<u>₩ (12,301)</u>		

(*1) In consideration of the amounts adjusted in revenue, the effective portion of changes in fair value of cash flow hedges amounting to ₩(38,953) million, net of tax, was recognized in accumulated other comprehensive income or loss.

(*2) In consideration of the amounts adjusted in revenue, firm commitment assets of ₩49,687 million and firm commitment liabilities of ₩61,988 million were recognized in the separate statements of financial position by applying a fair value hedge accounting.

(*3) The Company designated its long-term borrowings denominated in foreign currencies as hedging instruments to hedge the fair value of firm commitment.

(*4) Represents amounts related to exchange rights on exchangeable bonds issued by the Company and valuation of the share purchase contract between the Company and the investor of redeemable convertible preferred stock issued by Doosan Engineering & Construction Co., Ltd. ("DEC").

Derivative financial instruments are classified as non-current assets (liabilities) if the remaining time to maturity from the reporting date is over 12 months; otherwise, they are classified as current assets (liabilities).

9. Derivative financial instruments (cont'd)

9-2. In connection with the issuance of redeemable convertible preferred shares by DEC, the Company entered into contracts with preferred shareholders. The details of contract are as follows:

	Description
Settlement	The Company and the investor settle the contract in cash for the amount of the net selling price less issuance price of the whole redeemable convertible preferred stock at December 16, 2016. If the settlement amount is positive (net selling price exceeds issuing price) the investor pays the amount to the Company, otherwise the Company pays to the investor.
Early settlement	The investor, under certain circumstances, may request a settlement to the Company even before the settlement day, for the amount calculated by the same method above.
Early call option	The Company may request, from September 14 to 16, 2015, the purchase of up to 30% of the redeemable convertible preferred stock owned by the investor at the issuance price plus a certain level of incentive.
Settlement call option	The Company may request, from September 14 to 16, 2016, the purchase of a whole or part of the redeemable convertible preferred stock owned by the investor, at the issuance price.

The Company recognized the fair value of contract between shareholders as derivative financial assets as at December 31, 2015.

10. Financial instruments

Financial assets as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015						
	Financial assets at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Held-to-maturity financial assets	Derivatives designated as hedging instruments	Carrying amount	Fair value
Cash and cash equivalents	₩ -	₩ 754,507	₩ -	₩ -	₩ -	₩ 754,507	₩ 754,507
Short and long-term financial instruments	-	85,169	-	-	-	85,169	85,169
Short and long-term investments	-	-	47,980	3,100	-	51,080	51,080
Derivative financial assets	32,870	-	-	-	31,425	64,295	64,295
Trade and other receivables	-	1,004,458	-	-	-	1,004,458	1,004,458
Deposits	-	66,677	-	-	-	66,677	66,677
	<u>₩ 32,870</u>	<u>₩ 1,910,811</u>	<u>₩ 47,980</u>	<u>₩ 3,100</u>	<u>₩ 31,425</u>	<u>₩ 2,026,186</u>	<u>₩ 2,026,186</u>
	2014						
	Financial assets at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Held-to-maturity financial assets	Derivatives designated as hedging instruments	Carrying amount	Fair value
Cash and cash equivalents	₩ -	₩ 295,172	₩ -	₩ -	₩ -	₩ 295,172	₩ 295,172
Short and long-term financial instruments	-	97,879	-	-	-	97,879	97,879
Short and long-term investments	-	-	44,130	10,100	-	54,230	54,230
Derivative financial assets	6,546	-	-	-	34,501	41,047	41,047
Trade and other receivables	-	977,369	-	-	-	977,369	977,369
Deposits	-	67,648	-	-	-	67,648	67,648
	<u>₩ 6,546</u>	<u>₩ 1,438,068</u>	<u>₩ 44,130</u>	<u>₩ 10,100</u>	<u>₩ 34,501</u>	<u>₩ 1,533,345</u>	<u>₩ 1,533,345</u>

10. **Financial instruments (cont'd)**

Financial liabilities as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015				
	Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost	Derivatives designated as hedging instruments	Carrying amount	Fair value
Trade and other payables	₩ -	₩ 1,404,193	₩ -	₩ 1,404,193	₩ 1,404,193
Borrowings and debentures	-	4,029,268	-	4,029,268	4,029,268
Derivative financial liabilities	29,283	-	236,731	266,014	266,014
Financial guarantee liabilities	-	2,718	-	2,718	2,718
Others	-	203,099	-	203,099	203,099
	<u>₩ 29,283</u>	<u>₩ 5,639,278</u>	<u>₩ 236,731</u>	<u>₩ 5,905,292</u>	<u>₩ 5,905,292</u>

	2014				
	Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost	Derivatives designated as hedging instruments	Carrying amount	Fair value
Trade and other payables	₩ -	₩ 1,320,622	₩ -	₩ 1,320,622	₩ 1,320,622
Borrowings and debentures	-	2,749,076	-	2,749,076	2,749,076
Derivative financial liabilities	68,481	-	155,389	223,870	223,870
Financial guarantee liabilities	-	5,438	-	5,438	5,438
Others	-	196,317	-	196,317	196,317
	<u>₩ 68,481</u>	<u>₩ 4,271,453</u>	<u>₩ 155,389</u>	<u>₩ 4,495,323</u>	<u>₩ 4,495,323</u>

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique. The level of hierarchy of fair value is as follows:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly.

Level 3: Inputs that are not based on observable market data (unobservable inputs).

The fair value of financial instruments traded in active markets is based on quoted market prices at the reporting date. These instruments are included in level 1. Instruments included in level 1 comprise primarily listed equity investments classified as trading securities or available-for-sale.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.

10. Financial instruments (cont'd)

If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.

Specific valuation techniques used to value financial instruments include:

- Quoted or dealer price of similar instruments.
- The fair value of forward foreign exchange contracts determined by using forward exchange rates at the reporting date, with the resulting value discounted to present value.
- Other financial techniques such as discounted cash flow analysis.

As for trade and other receivables, the book value approximates reasonable estimates of fair value.

The level of fair value measurements of financial instruments as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value:				
Financial assets at fair value through profit or loss	₩ -	₩ 32,870	₩ -	₩ 32,870
Available-for-sale financial assets	205	-	-	205
Derivatives designated as hedging instruments	-	31,425	-	31,425
	<u>₩ 205</u>	<u>₩ 64,295</u>	<u>₩ -</u>	<u>₩ 64,500</u>
Financial liabilities measured at fair value:				
Financial liabilities at fair value through profit or loss	₩ -	₩ 29,283	₩ -	₩ 29,283
Derivatives designated as hedging instruments	-	236,731	-	236,731
	<u>₩ -</u>	<u>₩ 266,014</u>	<u>₩ -</u>	<u>₩ 266,014</u>
	2014			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value:				
Financial assets at fair value through profit or loss	₩ -	₩ 6,546	₩ -	₩ 6,546
Available-for-sale financial assets	275	-	-	275
Derivatives designated as hedging instruments	-	34,501	-	34,501
	<u>₩ 275</u>	<u>₩ 41,047</u>	<u>₩ -</u>	<u>₩ 41,322</u>
Financial liabilities measured at fair value:				
Financial liabilities at fair value through profit or loss	₩ -	₩ 68,481	₩ -	₩ 68,481
Derivatives designated as hedging instruments	-	155,389	-	155,389
	<u>₩ -</u>	<u>₩ 223,870</u>	<u>₩ -</u>	<u>₩ 223,870</u>

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10. Financial instruments (cont'd)

The above tables excludes financial assets and financial liabilities which are not measured at fair value as differences between the carrying amounts and fair values are not significant.

During the year ended December 31, 2015 and 2014 there were no transfers between different levels of fair value measurements hierarchy.

Gains or losses on financial instruments for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015							Other comprehensive income (loss)(*1) Net change in fair value of available-for-sale financial assets
	Profit or loss							
	Interest income (expense)	Dividend income	(Reversal of) allowance for doubtful accounts	Impairment loss on financial instruments	Gain or loss on disposal	Gain or loss financial guarantee		
Financial assets:								
Loans and receivables	₩ 8,484	₩ -	₩ (173,928)	₩ -	₩ (4,973)	₩ -	₩ -	
Available-for-sale financial assets	-	841	-	(587)	(906)	-	(74)	
Held-to-maturity financial assets	172	-	-	-	-	-	-	
	<u>₩ 8,656</u>	<u>₩ 841</u>	<u>₩ (173,928)</u>	<u>₩ (587)</u>	<u>₩ (5,879)</u>	<u>₩ -</u>	<u>₩ (74)</u>	
Financial liabilities:								
Financial liabilities carried at amortized cost	₩ (124,061)	₩ -	₩ -	₩ -	₩ (350)	₩ (3,919)	₩ -	

(*1) Amounts in other comprehensive income or loss exclude deferred tax effect.

	2014							Other comprehensive income (loss)(*1) Net change in fair value of available-for-sale financial assets
	Profit or loss							
	Interest income (expense)	Dividend income	(Reversal of) allowance for doubtful accounts	Impairment loss on financial instruments	Gain or loss on disposal	Gain or loss financial guarantee		
Financial assets:								
Loans and receivables	₩ 13,611	₩ -	₩ (93,092)	₩ -	₩ (14,332)	₩ -	₩ -	
Available-for-sale financial assets	-	95	-	(3,185)	(875)	-	(174)	
Held-to-maturity financial assets	698	-	-	-	-	-	-	
	<u>₩ 14,309</u>	<u>₩ 95</u>	<u>₩ (93,092)</u>	<u>₩ (3,185)</u>	<u>₩ (15,207)</u>	<u>₩ -</u>	<u>₩ (174)</u>	
Financial liabilities:								
Financial liabilities carried at amortized cost	₩ (143,861)	₩ -	₩ -	₩ -	₩ (1,272)	₩ (3,190)	₩ -	

(*1) Amounts in other comprehensive income or loss exclude deferred tax effect.

Gain or loss on translation or transaction of foreign currencies arising from foreign currency transactions except for derivative financial instruments have been mostly incurred from financial assets classified as loans and receivables and financial liabilities measured at amortized cost.

10. Financial instruments (cont'd)

Details of gains or losses on valuation and settlement of derivative financial instruments for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Gain (loss) on valuation of derivative financial instruments	Gain (loss) on settlement of derivative financial instruments	Other comprehensive income (loss)
Derivatives held for trading	₩ 65,310	₩ (10,432)	₩ -
Fair value hedge derivatives	(172,033)	-	-
Cash flow hedge derivatives	(7,634)	(9,290)	71,086
	<u>₩ (114,357)</u>	<u>₩ (19,722)</u>	<u>₩ 71,086</u>

(*1) Other comprehensive income or loss does not reflect the deferred tax effect.

	2014		
	Gain (loss) on valuation of derivative financial instruments	Gain (loss) on settlement of derivative financial instruments	Other comprehensive income (loss)
Derivatives held for trading	₩ (75,604)	₩ 11,617	₩ -
Fair value hedge derivatives	(43,985)	-	-
Cash flow hedge derivatives	(14,727)	(18,241)	38,838
	<u>₩ (134,316)</u>	<u>₩ (6,624)</u>	<u>₩ 38,838</u>

(*1) Other comprehensive income or loss does not reflect the deferred tax effect.

Above gains or losses on financial instruments include amount in selling and administrative expenses, finance income or costs and other comprehensive income or loss.

Financial assets financial liabilities subject to an enforceable master netting arrangement or similar agreement as at December 31, 2015 is as follows (Korean won in millions):

	Eligible for legal right to offset		
	Total assets (liabilities)	Offset amount	Amount after offset
Derivative financial instrument assets	110,893	(46,598)	64,295
Derivative financial instrument liabilities	(312,165)	46,598	(265,567)

11. Share of investments in subsidiaries, associates and joint ventures

Details of share of investments in subsidiaries, associates and joint ventures as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Country of domicile	Equity ownership (%)		2015		2014
Subsidiaries:						
Doosan Engineering & Construction Co., Ltd. ("DEC")	Korea	80.01	₩	1,334,435	₩	1,537,184
Doosan Infracore Co., Ltd. (*1)	Korea	36.40		1,483,471		1,483,471
Doosan Engine Co., Ltd. (*1)	Korea	42.66		6,958		6,958
Doosan Power Systems S.A.	Luxem -bourg	100.00		404,074		404,074
Doosan Enpure Ltd.	England	100.00		4,951		4,951
S.C. Doosan IMGB S.A.	Romania	99.85		47,809		47,809
Doosan Heavy Industries Vietnam Co., Ltd.	Vietnam	75.24		126,886		126,886
Doosan Heavy Industries Japan Corp.	Japan	100.00		1,993		1,993
Doosan Heavy Industries America Holdings Ltd.	America	100.00		159,133		155,173
HF Controls Corp.	America	100.00		5,642		5,642
Doosan Power Systems India Private Ltd.	India	99.48		104,925		104,925
Doosan Construction Site Solutions Vietnam Co., Ltd.	Vietnam	100.00		12,455		12,455
Doosan Heavy Industries Muscat LLC (*2)	Oman	70.00		319		-
Doosan Power System Arabia (*2)	Saudi Arabia	51.00		2,039		-
				<u>3,695,090</u>		<u>3,891,521</u>
Associates:						
Tamra Offshore Wind Power Co., Ltd.	Korea	36.00		9,864		9,864
				<u>9,864</u>		<u>9,864</u>
Joint ventures:						
Haman Industrial Complex Company (*3)	Korea	53.33		1,292		1,292
				<u>1,292</u>		<u>1,292</u>
				<u>₩ 3,706,246</u>		<u>₩ 3,902,677</u>

(*1) These investments have been pledged as collateral for hybrid equity instrument of subsidiaries. (See Note 31)

(*2) These investees were established during the year 2015.

(*3) Although the Company's equity interest in the investee is more than 50%, the investee is classified as a joint venture considering the agreement between the shareholders.

11. Share of investments in subsidiaries, associates and joint ventures (cont'd)

Impairment loss on equity investment in subsidiaries, associates and joint ventures

When impairment testing was performed, the book value of Doosan Engineering & Construction Co., Ltd. exceeded its recoverable amount by ₩202,749 million, which was recognized as an impairment loss and recorded as non-operating expense. The recoverable amount of Doosan Engineering & Construction Co., Ltd. was measured by an independent appraisal agency and determined based on value in use.

Details of Impairment losses on equity investment in subsidiaries, associates and joint ventures as at December 31, 2015 are as follows (Korean won in millions):

	Amounts	
I. Book value before impairment losses	₩	1,537,184
Operating value		2,369,350
Non-operating assets (*1)		992,950
Business value		3,362,300
Net liabilities (*1)		1,694,463
Equity value		1,667,837
II. Own equity value (Equity ownership : 80.01%)		1,334,435
III. Impairment losses (I – II)	₩	202,749

(*1) Refer the financial statements of Doosan Engineering & Construction Co., Ltd. as at December 31, 2015

The recoverable amount of Doosan Engineering & Construction Co., Ltd. as at December 31, 2015 has been determined based on a value in use calculation using cash flow projections from financial budgets approved by senior management covering a five-year period.

- ① Based on the nature of business, cash flows for 5 years were estimated. The cash flows were based on past experiences, actual results of operations, remaining sales orders and future sales orders for 5 years. After 5 years, a permanent growth rate of 1.5% was applied.
- ② A discount rate for the recoverable amount was based on a market interest rate at the end of the current reporting period and an average borrowing rate in the construction industry.

Management's assessment on the future trend of construction industry is reflected in significant assumptions on value in use.

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12. Property, plant and equipment

12-1. Changes in the net book value of property, plant and equipment for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	Land	Buildings & Structures	Machinery	Others	Construction-in-progress	Total
As at January 1	₩ 1,881,381	₩ 281,040	₩ 279,978	₩ 74,256	₩ 119,524	₩ 2,636,179
Acquisitions / capital expenditure	77,021	238	155	632	153,456	231,502
Transfer	375	12,289	72,958	17,896	(111,816)	(8,298)
Net increase by revaluation	305,444	-	-	-	-	305,444
Others	-	(16)	76	646	(1,274)	(568)
Disposals	(801)	(1,254)	(5,111)	(322)	-	(7,488)
Depreciation	-	(27,283)	(55,389)	(21,723)	-	(104,395)
As at December 31	₩ 2,263,420	₩ 265,014	₩ 292,667	₩ 71,385	₩ 159,890	₩ 3,052,376
Acquisition cost	1,288,903	631,697	1,019,424	232,104	159,890	3,332,018
Accumulated depreciation (*1)	-	(366,683)	(726,757)	(160,719)	-	(1,254,159)
Accumulated gain on revaluation of land	974,517	-	-	-	-	974,517

(*1) Includes the accumulated impairment losses.

	2014					
	Land	Buildings & Structures	Machinery	Others	Construction-in-progress	Total
As at January 1,	₩ 1,876,089	₩ 296,576	₩ 307,816	₩ 75,499	₩ 94,788	₩ 2,650,768
Acquisitions / capital expenditure	-	16	1,732	1,929	92,785	96,462
Transfer	5,292	12,139	29,572	20,739	(65,433)	2,309
Others	-	-	-	100	(2,616)	(2,516)
Disposals	-	(304)	(759)	(598)	-	(1,661)
Depreciation	-	(27,387)	(57,755)	(23,413)	-	(108,555)
Impairment loss	-	-	(628)	-	-	(628)
As at December 31	₩ 1,881,381	₩ 281,040	₩ 279,978	₩ 74,256	₩ 119,524	₩ 2,636,179
Acquisition cost	1,212,121	623,531	962,179	230,096	119,524	3,147,451
Accumulated depreciation (*1)	-	(342,491)	(682,201)	(155,840)	-	(1,180,532)
Accumulated gain on revaluation of land	669,260	-	-	-	-	669,260

(*1) Includes the accumulated impairment losses.

As at December 31, 2015, certain property, plant and equipment have been pledged as collateral for borrowings (See Note 31).

12. Property, plant and equipment (cont'd)

12-2. Capitalized borrowing costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Capitalized borrowing costs	₩	1,044	₩	1,825
Interest rate of borrowing costs		3.88%		4.32%

12-3. Details of depreciation on property, plant and equipment for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Cost of sales	₩	97,382	₩	101,543
Selling and administrative expenses		7,013		7,012
	₩	104,395	₩	108,555

12-4. Revaluation of land

The Company engaged Pacific Appraisal Co., Ltd. an accredited independent valuation specialist, to determine the fair value of its land and the date of the revaluation was October 31, 2015.

Fair value of the land was determined based on Officially Assessed Reference Land Price (OARLP) and the final appraised value was determined by the following procedures; i) remark a sales comparable, which is identical or similar to the subject property, in accordance with principles of marketability and replacement, ii) calculate the reference land price by using the sales comparison approach, and iii) review whether the valuation based on OARLP is appropriate.

The OARLP approach is one of valuation methods, which assess the price of property by modifying the time in line with the fluctuation rate of land price based on the comparable OARLP of nearby area and considering all elements of valuation factors such as locations, conditions of nearby land price, accessibility, shape and scale of parcel, road and traffic conditions, restrictions under public law, general demand, marketability and others. Other elements such as the rates of difference between the subject property and precedential appraisals, land price in nearby area and real estate business trends are also considered.

The carrying amount of land measured using the cost model is ₩1,228,903 million as at December 31, 2015.

	2015		2014	
As at January 1	₩	507,731	₩	507,731
Increase in accumulated other comprehensive income by revaluation		305,505		-
Tax effect of accumulated other comprehensive income by revaluation		(73,932)		-
Transfer of retained earnings by disposal		(141)		-
As at December 31	₩	739,163	₩	507,731

Loss on the revaluation of land which is reflected in the profit for the year is ₩61 million.

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13. Intangible assets

Changes in the net book value of intangible assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015				
	Goodwill	Industrial property rights	Development costs	Others	Total
As at January 1	₩ 3,014	₩ 280	₩ 492,549	₩ 96,282	₩ 592,125
Acquisitions / Capital expenditures	-	-	150,669	2	150,671
Transfer	-	-	(7,596)	23,183	15,587
Others	-	-	(70)	1,041	971
Disposals	-	-	-	(878)	(878)
Amortization	-	(57)	(47,738)	(19,675)	(67,470)
Impairment	-	-	(55,612)	(12,032)	(67,644)
As at December 31	<u>₩ 3,014</u>	<u>₩ 223</u>	<u>₩ 532,202</u>	<u>₩ 87,923</u>	<u>₩ 623,362</u>

	2014				
	Goodwill	Industrial property rights	Development costs	Others	Total
As at January 1	₩ 3,014	₩ 310	₩ 402,456	₩ 106,923	₩ 512,703
Acquisitions / Capital expenditures	-	31	137,127	-	137,158
Transfer	-	-	(1,508)	7,178	5,670
Others	-	-	-	6	6
Disposals	-	-	-	(785)	(785)
Amortization	-	(61)	(33,224)	(17,040)	(50,325)
Impairment	-	-	(12,302)	-	(12,302)
As at December 31	<u>₩ 3,014</u>	<u>₩ 280</u>	<u>₩ 492,549</u>	<u>₩ 96,282</u>	<u>₩ 592,125</u>

The carrying amounts of intangible assets with indefinite useful lives as at December 31, 2015 and 2014 amounted to ₩42,178 million and ₩48,215 million, respectively.

Research and development costs expensed as incurred for the years ended December 31, 2015 and 2014 amounted to ₩19,723 million and ₩19,715 million, respectively.

Capitalized borrowing costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Capitalized borrowing costs	₩ 6,278	₩ 6,153
Interest rate of borrowing costs	3.88%	4.32%

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13. Intangible assets (cont'd)

Details of amortization on intangible assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Cost of sales	₩ 55,274	₩ 40,028
Selling and administrative expenses	12,196	10,297
	<u>₩ 67,470</u>	<u>₩ 50,325</u>

14. Debentures and borrowings

14-1. Short-term borrowings as at December 31, 2015 and 2014 are as follows (Korean won in millions):

Type of borrowings	Lender	Annual interest rate (%) as at December 31, 2015	2015		2014	
Denominated in KRW	Korea Development Bank ("KDB")	3.36 ~ 3.84	₩	300,000	₩	200,000
	Korea Exim Bank	2.64 ~ 3.00		268,081		57,517
	Woori Bank	3.42 ~ 3.92		250,000		50,000
	Shinhan Bank	2.86 ~ 3.04		100,000		50,000
	Jeonbuk Bank	3.30		10,000		-
	Kyongnam Bank	3.52		20,000		-
	Kookmin Bank	3.25		30,000		30,000
	Nonghyup Bank	3.38 ~ 3.56		150,000		50,000
	Daegu Bank	3.31 ~ 3.40		40,000		-
				<u>1,168,081</u>		<u>437,517</u>
Denominated in foreign currencies	KDB and others	0.40~3.89		229,762		200,972
			₩	1,397,843	₩	638,489
Less discount on short-term borrowings				-		(13,407)
			₩	<u>1,397,843</u>	₩	<u>625,082</u>

14. Debentures and borrowings (cont'd)

14-2. Details of debentures as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Series	Maturity	Annual interest rate (%) as at December 31, 2015	2015	2014
Public subscription debentures in Korea won	41	-	-	₩ -	₩ 150,000
	43-1	-	-	-	60,000
	39	2016.05.12	5.35	150,000	150,000
	42	2017.06.07	4.40	200,000	200,000
	43-2	2017.11.27	3.85	40,000	40,000
	43-3	2019.11.27	4.25	100,000	100,000
Public subscription debentures in foreign currencies(*1)		2020.04.27	2.13	586,000	-
Private subscription debentures	44	2017.05.15	4.11	90,000	90,000
	45	2017.07.31	3.90	100,000	100,000
Exchangeable bond	40	2016.06.14	1.50	115,656	155,522
				<u>1,381,656</u>	<u>1,045,522</u>
Less current portion				(265,656)	(365,522)
Less discount on bonds payable				<u>(7,655)</u>	<u>(1,747)</u>
				<u>₩ 1,108,345</u>	<u>₩ 678,253</u>

(*1) Guaranteed by Korea Exim Bank in connection with debentures in foreign currencies (See Note 30).

14-3. Exchangeable bonds as at December 31, 2015 are detailed as follows (Korean won in millions except for exchange price):

Issue date	Maturity date	Coupon rate	YTM	Exercise year	Exchange price	Issuance value	Book value
June 14, 2011	June 14, 2016	1.50%	4.50%	June 15, 2011 ~ May 14, 2016	₩53,480/share	₩220,000	₩132,225

Early redemption

The early redemption right is exercisable as a whole or in part against the face value of the exchangeable bonds at the interest payment date in three years after the date of issuance of bonds and every interest payment date at every six month thereafter.

Redemption at maturity

The coupon rate for the bond is 1.5%. For bonds exchanged with equity shares by maturity, 116.72% of the principal amount will be paid on June 14, 2016 with a yield to maturity rate of 4.5%.

Calculation of conversion price

Pursuant to the bond subscription agreement, which there is an event resulting in increase in issued capital without consideration, stock dividends or splits or increase in issued capital at a price less than the market price during the year from the date of issuance through one month before maturity, the initial exchange price may be adjusted on the day before the event occurs. As at December 31, 2015, the exchange price is ₩53,480.

14. **Debentures and borrowings (cont'd)**

Changes in the carrying amount of exchangeable bond for the year ended December 31, 2015 are as follows (Korean won in millions):

	January 1	Exercise / amortization	December 31
Exchangeable bonds	₩ 155,522	₩ (39,866)	₩ 115,656
Redemption premium	25,998	(6,664)	19,334
Discount on bond	(1,230)	937	(293)
Exchange rights adjustment	(10,369)	7,898	(2,471)
Book value	169,921	(37,696)	132,225
Consideration for exchange rights (derivative financial liabilities)	3	(3)	-

Exchange rights were not exercised in 2015 and the exchangeable bonds amounting to ₩39,866 million were redeemed by exercising the early redemption rights (the number of shares expired due to early redemption: 745,444 shares) for the year ended December 31, 2015.

14-4. Long-term borrowings as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Financial institution	Maturity	Annual interest rate (%) as at December 31, 2015	2015	2014
Borrowings denominated in KRW	NH Investment Securities	-	-	₩ -	₩ 50,000
	Korea Investment & Securities Co., Ltd.	-	-	-	100,000
	HI Investment Securities	2016.01.14	3.50	200,000	200,000
	Korea Exim Bank	2016.03.26 ~ 2017.03.27	3.34~3.36	292,500	340,100
	KDB(*1)	2016.01.14 ~ 2017.04.15	4.00~5.57	182,500	199,167
	Suhyup Bank	2021.07.11 ~ 2023.03.20	3.20~3.70	12,801	11,791
	Kookmin Bank	2018.04.02 ~ 2018.09.13	3.90	100,000	-
Borrowings denominated in foreign currencies	Arab Bank and others	2016.04.24	2.33	175,800	164,880
	National Bank of Abu Dhabi and others	2018.12.22	2.79	117,200	-
				<u>1,080,801</u>	<u>1,065,938</u>
Less current portion				<u>(540,800)</u>	<u>(260,100)</u>
				<u>₩ 540,001</u>	<u>₩ 805,838</u>

(*1) The Company's PP&E and others have been pledged as collateral for borrowings (See Note 31).

14. Debentures and borrowings (cont'd)

14-5 The Company transferred revenue from construction contracts to a special purpose vehicle, and the special purpose vehicle issued asset backed securities backed by transferred assets. As at December 31, 2015, the special purpose vehicle is liable on the following asset backed securities:

	Maturity	Annual interest rate (%) as at December 31, 2015	2015
KDPP 1st Co., Ltd.	2018.12.16	3.89	₩ 115,000
Happy Tomorrow 20th Co., Ltd.	2018.12.16	3.89	50,000
			<u>165,000</u>
Less current portion			(33,000)
Less discount on bonds payable			(1,291)
			<u>₩ 130,709</u>

15. Employee benefits liability

The Company operates a defined benefit plan, and cost of providing benefit under the defined benefit plan is determined using the projected unit credit method on actuarial valuation of the present value of its defined benefit obligations and plan assets.

Components of the employee benefit liability as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Present value of defined benefit obligations	₩ 377,911	₩ 359,214
Fair value of plan assets (*1)	(242,894)	(187,969)
Benefit liability per statement of financial position	<u>₩ 135,017</u>	<u>₩ 171,245</u>

(*1) Includes employer contributions amounting to ₩1,103 million and ₩1,301 million to the National Pension Service as at December 31, 2015 and 2014, respectively.

Expenses incurred in relation to the employee benefit liability, which are reflected in the statement of profit or loss, for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Current service cost	₩ 38,439	₩ 36,713
Interest expenses, net	4,812	7,513
	<u>₩ 43,251</u>	<u>₩ 44,226</u>

Classification of expense related to the employee benefit liability for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Cost of sales	₩ 34,776	₩ 34,181
Selling and administrative expenses	8,475	10,045
	<u>₩ 43,251</u>	<u>₩ 44,226</u>

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15. Employee benefits liability (cont'd)

Changes in the present value of the defined benefit obligations for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
As at January 1,	₩ 359,214	₩ 305,082
Current service costs	38,439	36,713
Transfer from related parties	526	273
Transfer to related parties	(748)	(884)
Interests	10,591	12,516
Re-measurement gains (losses) in OCI :		
Actuarial changes arising from changes in demographic assumptions	(19,331)	4,714
Actuarial changes arising from changes in financial assumptions	24,347	12,789
Others	12,900	5,115
Benefits paid	(48,027)	(17,104)
As at December 31,	₩ 377,911	₩ 359,214

Changes in the fair value of plan assets for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
As at January 1,	₩ 187,969	₩ 123,147
Expected return on plan assets	5,779	5,003
Transfer from related parties	141	129
Transfer to related parties	(203)	(175)
Re-measurement losses in OCI	(2,391)	(1,607)
Contributions by employer	64,900	64,000
Benefits paid	(13,301)	(2,528)
As at December 31,	₩ 242,894	₩ 187,969

In relation to the defined benefit plans, the reasonable estimates of future employer contributions during the year 2016 amounts to ₩22,027 million. In addition, the actual return on plan assets for the years ended December 31, 2015 and 2014 amounts to ₩3,804 million and ₩3,701 million, respectively.

The principal assumptions used in determining employee benefit liability as at December 31, 2015 and 2014 are as follows:

	2015	2014
Discount rate	3.10%	3.40%
Future salary increases	Employee: 2.80% Executives: 2.80%	Employee: 2.00% Executives: 3.40%

Details of a sensitivity analysis on the defined benefit obligation from changes in significant assumptions as at December 31, 2015 are as follows (Korean won in millions):

	Sensitivity level	
	1% increase	1% decrease
Discount rate	₩ (24,851)	₩ 28,459
Future salary increases	23,773	(21,337)

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15. Employee benefits liability (cont'd)

The maturity of the defined benefit obligation as at December 31, 2015 is as follows (Korean won in millions):

	Within the next 12 months	Between 1 and 2 years	Between 2 and 5 years	Between 5 and 10 years	Total
Expected contributions to the defined benefit obligation	₩ 28,803	₩ 54,420	₩ 127,264	₩ 209,914	₩ 420,401

16. Provisions

Changes in significant provisions for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015				
	January 1	Arising during the year	Unused amounts reversed	Utilized	December 31
Provision for warranties	₩ 126,852	₩ 13,829	₩ (4,336)	₩ (22,784)	₩ 113,561
Others	26,121	35,177	(8,600)	-	52,698
	<u>₩ 152,973</u>	<u>₩ 49,006</u>	<u>₩ (12,936)</u>	<u>₩ (22,784)</u>	<u>₩ 166,259</u>
	2014				
	January 1	Arising during the year	Unused amounts reversed	Utilized	December 31
Provision for warranties	₩ 143,712	₩ 6,552	₩ (558)	₩ (22,854)	₩ 126,852
Others	15,350	10,771	-	-	26,121
	<u>₩ 159,062</u>	<u>₩ 17,323</u>	<u>₩ (558)</u>	<u>₩ (22,854)</u>	<u>₩ 152,973</u>

The Company estimates expenses required to settle the Company's obligations on product warranty, refunds, maintenance service and others based on the level of warranty period, historical experience and other considerations.

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17. Equity

The Company is authorized to issue 400,000,000 shares, with a par value of ₩5,000 per share and the number of ordinary stock issued as at December 31, 2015 and 2014 is 106,158,256. The number of redeemable convertible preferred stock (RCPS) issued as at December 31, 2015 and 2014 is 13,203,540. The number of shares with limited voting rights under the Korean Commercial Code as at December 31, 2015 and 2014 is 7,312,505.

Changes in the issued capital and paid-in capital in excess of par value of the Company for the year ended December 31, 2015 are summarized as follows (Korean won in millions, number of shares):

	Number of shares		Issued capital			Paid-in capital in excess of par value		
	Ordinary stock	Preferred stock(*1)	Ordinary stock	Preferred stock(*1)	Total	Ordinary stock	Preferred stock(*1)	Total
Balance at January 1	106,158,256	13,203,540	₩ 530,791	₩ 66,018	₩ 596,809	₩ 73,011	₩ 306,662	₩ 379,673
Balance at December 31	106,158,256	13,203,540	₩ 530,791	₩ 66,018	₩ 596,809	₩ 73,011	₩ 306,662	₩ 379,673

(*1) On December 6, 2014, the Company issued RCPS under the resolution of the Board of Directors on November 25, 2014 and the details are as follows:

	Description
Purpose of issuance	Improve the Company's capital structure
Issued shares	Cumulative non-participating preferred stock
Number of issued shares	13,203,540 shares
Value of issued shares	₩28,250 per share
Voting right	Preferred stock has one voting right per share, same as common stock, and when a resolution of shareholders' meeting is unfavorable to the preferred stock, such resolution must be also approved during the preferred stockholders' meeting.
Dividend right	Based on the issue price, 3.3% per year (after 5 years, 0.75% will be added annually on the index of 5-year average rate of returns posted by the private bond value appraisal institutions)
Redeemable right	① 1 ~ 5 years: early redemption is available to the extent of 10% of total preferred stock with 10% plus issuance price. ② Redemption at year 5: redeemable all or some portion of preferred stock 5 years after the payment date. (At issue price plus 5.48% per annum less prepaid dividends) ③ 5 ~ 10 years: redeemable with adjusted amount based on the rate of returns posted by the private bond value appraisal institutions.
Convertible right	① Convertible all or some portion of preferred stocks ② Conversion year: 1~10 years after the payment date ③ Conversion ratio: 1 common stock to 1 preferred stock

The Company has the redeemable right in connection with the above RCPS and there are no contractual obligations for the Company to pay in cash and/or other financial assets. Therefore, the Company classified the RCPS as equity.

18. Capital surplus

Capital surplus as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Paid-in capital in excess of par value	₩ 379,673	₩ 379,673
Revaluation surplus	594,262	594,262
Other capital surplus	284,402	282,301
	₩ 1,258,337	₩ 1,256,236

19. Other components of equity

Other components of equity as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Treasury shares	₩	(90,261)	₩	(90,261)
Stock options		11,988		13,104
	₩	<u>(78,273)</u>	₩	<u>(77,157)</u>

As at December 31, 2015, the Company holds 7,312,505 (2014: 7,312,505 shares) treasury shares for the stabilization of its share price.

The Company has granted stock options to its executives. The settlement method for stock options includes issuance of new shares, issuance of treasury shares or cash settlement. The type of settlement method chosen is determined based on the Board of Directors' decision at the time of exercise. These stock options require a vesting condition of a two year continuous employment from the grant date.

The terms and conditions of stock options granted as at December 31, 2015 are summarized as follows (Korean won in unit, shares in units):

Grant date	Number of shares to be issued	Exercisable period	Exercise price	Estimated fair value as at the grant date
2006.02.27	2,600	2009.02.27~2016.02.26	33,200	12,950
2007.03.16	8,600	2010.03.17~2017.03.16	50,200	22,564
2008.03.21	17,400	2011.03.21~2018.03.20	121,200	49,565
2009.03.27	13,200	2012.03.27~2019.03.26	73,000	32,595
2010.03.26	29,600	2013.03.26~2020.03.25	90,100	41,077
2011.03.25	59,900	2014.03.25~2021.03.24	65,700	24,642
2012.03.30	143,200	2015.03.30~2022.03.29	66,800	16,337
2013.03.29	279,900	2016.03.29~2023.03.28	44,900	10,860
2014.03.28	342,300	2017.03.28~2024.03.27	34,550	7,948
	<u>896,700</u>			

19. Other components of equity (cont'd)

Change in the stock options for the year ended December 31, 2015 is summarized as follows (Korean won in millions, shares in units):

Grant date	Number of shares to be issued			
	January 1	Newly granted	Retired	December 31
2006.02.27	2,600	-	-	2,600
2007.03.16	8,600	-	-	8,600
2008.03.21	19,000	-	(1,600)	17,400
2009.03.27	15,450	-	(2,250)	13,200
2010.03.26	34,400	-	(4,800)	29,600
2011.03.25	79,100	-	(19,200)	59,900
2012.03.30	220,400	-	(77,200)	143,200
2013.03.29	279,900	-	-	279,900
2014.03.28	394,800	-	(52,500)	342,300
	<u>1,054,250</u>	<u>-</u>	<u>(157,550)</u>	<u>896,700</u>

Grant date	Valuation			
	January 1	Newly granted	Retired	December 31
2006.02.27	₩ 33	₩ -	₩ -	₩ 33
2007.03.16	194	-	-	194
2008.03.21	942	-	(79)	863
2009.03.27	504	-	(74)	430
2010.03.26	1,413	-	(197)	1,216
2011.03.25	1,950	-	(473)	1,477
2012.03.30	3,600	-	(1,261)	2,339
2013.03.29	2,633	407	-	3,040
2014.03.28	1,835	1,535	(974)	2,396
	<u>₩ 13,104</u>	<u>₩ 1,942</u>	<u>₩ (3,058)</u>	<u>₩ 11,988</u>

The Company's weighted average share price at the dates of exercise for the years ended December 31, 2015 and 2014 are ₩24,195 and ₩30,751, respectively. The Company's weighted average expected durations of share based payment for December 31, 2015 and 2014 are 0.8 years and 1.5 years, respectively.

Compensation expenses associated with stock options for the years ended December 31, 2015 and 2014 are ₩985 million and ₩2,681 million, respectively, and compensation expenses amounting to ₩324 million is expected to be recognized in the future years.

19. Other components of equity (cont'd)

The estimated fair value was calculated using the modified fair value method and assumptions applied to this method are summarized as follows:

Grant date	Risk free rate (*1)	Expected exercise period	Expected volatility	Expected dividend yield
2006.02.27	5.01%	3 years	53.87%	1.69%
2007.03.16	4.79%	3 years	49.33%	5.67%
2008.03.21	5.25%	3 years	56.02%	7.33%
2009.03.27	3.71%	3 years	65.15%	9.00%
2010.03.26	3.82%	3 years	66.45%	10.00%
2011.03.25	3.66%	3 years	53.12%	10.00%
2012.03.30	3.57%	3 years	38.21%	13.33%
2013.03.29	2.45%	3 years	35.98%	15.00%
2014.03.28	2.88%	3 years	34.72%	15.00%

(*1) Based on a three-year treasury bond yield rate.

20. Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Loss on valuation of available-for-sale financial assets	₩	(3,815)	₩	(3,759)
Gain (loss) on valuation of derivative financial instruments		14,930		(38,953)
Gain on revaluation of land		739,163		507,731
	₩	750,278	₩	465,019

Details of income taxes on other comprehensive income items directly reflected in equity for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Balance before tax	Tax effect	Balance after tax
Gain (loss) on valuation of available-for-sale financial assets	₩ (5,033)	₩ 1,218	₩ (3,815)
Gain (loss) on valuation of derivative financial instruments	19,697	(4,767)	14,930
Gain (loss) on revaluation of land	975,149	(235,986)	739,163
	₩ 989,813	₩ (239,535)	₩ 750,278
	2014		
	Balance before tax	Tax effect	Balance after tax
Gain (loss) on valuation of available-for-sale financial assets	₩ (4,959)	₩ 1,200	₩ (3,759)
Gain (loss) on valuation of derivative financial instruments	(51,389)	12,436	(38,953)
Gain (loss) on revaluation of land	669,830	(162,099)	507,731
	₩ 613,482	₩ (148,463)	₩ 465,019

21. Retained earnings

Retained earnings of the Company as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Legal reserve	₩	117,868	₩	109,168
Voluntary reserve		839,972		888,972
Unappropriated retained earnings		989,001		1,501,542
	₩	<u>1,946,841</u>	₩	<u>2,499,682</u>

Statements of appropriation of retained earnings

Details of the appropriation of retained earnings for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
I. Retained earnings before appropriations				
Unappropriated retained earnings carried forward from prior year	₩	1,455,399	₩	1,568,227
Loss for the year		(451,146)		(48,323)
Defined benefit plan actuarial losses		(15,393)		(18,362)
Gain on revaluation of land		141		-
		<u>989,001</u>		<u>1,501,542</u>
II. Transfer from voluntary reserves		64,000		49,000
III. Appropriations (2014: proposed)				
Legal reserve		9,700		8,700
Dividends		96,328		86,443
		<u>(106,028)</u>		<u>(95,143)</u>
Unappropriated retained earnings to be carried forward to the next year (I + II - III)	₩	<u>946,973</u>	₩	<u>1,455,399</u>

The proposed date of appropriation of retained earnings for 2015 is March 25, 2016, and the approved date of appropriation of retained earnings for 2014 was March 27, 2015.

Details of dividends for the years ended December 31, 2015 and 2014 were as follows:

	2015(*1)		2014(*1)	
	Common stock	Preferred stock	Common stock	Preferred stock (*2)
The number of shares dividends expected	98,845,751 shares	13,203,540 shares	98,845,751 shares	13,203,540 shares
Par value per share	₩ 5,000	₩ 5,000	₩ 5,000	₩ 5,000
Par value dividend rate	17.00%	18.60%	15.00%	18.60%
Amount of dividends per share	₩ 850.00	₩ 932.25	₩ 750.00	₩ 932.25
Dividends (Korean won in millions)	₩ 84,019	₩ 12,309	₩ 74,134	₩ 12,309

(*1) Represents the amount proposed prior to the date of approval of issuance of financial statements, but not recognized as appropriations of retained earnings on the financial statements as at the reporting date.

(*2) The number of redeemable convertible preferred stock issued for the year ended 2014 was 13,203,504 with dividends amounting to ₩12,309 million.

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21. Retained earnings (cont'd)

The Company paid dividends for the year ended December 31, 2014 in April 2015, and dividends for the year ended December 31, 2015 are expected to be paid in April 2016.

Pay-out ratio and dividend yield ratio for the years ended December 31, 2015 and 2014 were as follows:

		2015(*1)		2014 (*1)	
		Common stock	Preferred stock	Common stock	Preferred stock
Pay-out ratio	Dividends / profit for the year attributable to the equity holders of parent	-	-	-	-
Dividend yield ratio	Dividends per share / share price at the reporting date	4.13%	-	3.17%	-

(*1) The Company did not calculate the pay-out ratio for 2015 and 2014 as the Company recorded loss for the years.

22. Revenue

Revenue for the years ended December 31, 2015 and 2014 consist of the following (Korean won in millions):

	2015		2014	
Finished goods	₩	2,378,684	₩	2,621,344
Construction		2,765,483		2,872,384
Others		2,127		3,065
	₩	5,146,294	₩	5,496,793

23. Construction contracts

Accumulated profit and loss of construction contracts as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	Accumulated construction cost	Accumulated construction revenue	Accumulated construction profit (loss)	Receivables from construction contracts-billed	Receivables from construction contracts-unbilled	Due to customers for contract work
Power generation	₩ 22,939,565	₩ 27,658,253	₩ 4,718,688	₩ 219,450	₩ 1,140,386	₩ 653,368
Water	3,668,334	4,055,496	387,162	131,936	128,573	1,418
Industrial plants	703,137	750,561	47,424	6,567	30,301	15,745
Castings & forgings	365,162	367,171	2,009	53,280	-	-
Plant construction	1,235,228	1,257,669	22,441	7,674	14,618	10,882
General construction	2,026,072	2,179,703	153,631	756,117	113,126	55,382
	₩ 30,937,498	₩ 36,268,853	₩ 5,331,355	₩ 1,175,024	₩ 1,427,004	₩ 736,795

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23. Construction contracts (cont'd)

	2014					
	Accumulated construction cost	Accumulated construction revenue	Accumulated construction profit (loss)	Receivables from construction contracts-billed	Receivables from construction contracts-unbilled	Due to customers for contract work
Power generation	₩ 21,928,399	₩ 26,557,392	₩ 4,628,993	₩ 233,269	₩ 583,492	₩ 688,891
Water	3,281,925	3,607,768	325,843	12,220	243,910	4,344
Industrial plants	938,192	986,374	48,182	16,154	103,836	24,969
Castings & forgings	301,613	294,794	(6,819)	48,244	-	-
Plant construction	1,145,246	1,144,332	(914)	3,845	19,234	5,588
General construction	1,852,772	2,012,338	159,566	791,435	152,210	23,226
	<u>₩ 29,448,147</u>	<u>₩ 34,602,998</u>	<u>₩ 5,154,851</u>	<u>₩ 1,105,167</u>	<u>₩ 1,102,682</u>	<u>₩ 747,018</u>

Changes in construction contracts for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	Ordering organization	Project name	Term	2015			
				January 1,	Changes in contract	Realized revenue	December 31,
Power generation	EVN and others	Vinh Tan 4 Thermal Power Plant and others	2014.02~2018.06	₩ 10,474,803	₩ 4,052,849	₩ 3,792,135	₩ 10,735,517
Water	SWCC and others	Yanbu ph.3 MSF and others	2012.11~2016.12	858,531	263,010	435,691	685,850
Industrial plants	Tekniko Singapore Pte Ltd. and others	Cikarang GTSU 2 and STRE 2 and others	2014.04~2016.04	208,319	(41,773)	69,070	97,476
Castings & forgings	POSCO and others	Casting, Forging Shinboryung 1,2 electric generation construction and others	2015.01~2015.12	566,549	414,503	367,323	613,729
Plant construction	KOMIPO Co., Ltd. and Others	Seoul Forest Trimage and others	2013.06~2017.06	577,904	488,819	138,888	927,836
General construction	Hanyang Development Co., Ltd. and others		2013.07~2017.01	1,197,920	231,420	343,187	1,086,152
				<u>₩ 13,884,026</u>	<u>₩ 5,408,828</u>	<u>₩ 5,146,294</u>	<u>₩ 14,146,560</u>
	Ordering organization	Project name	Term	2014			
				t January 1,	Changes in contract	Realized revenue	December 31,
Power generation	SEC and others	Rabigh Power Plant and others	2010.09~2017.12	₩ 9,335,732	₩ 4,961,593	₩ 3,822,522	₩ 10,474,803
Water	SWCC and others	Yanbu ph.3 MSF and others	2012.11~2016.12	1,358,239	42,472	542,180	858,531
Industrial plants	Samsung Heavy Industries Co., Ltd. and others	Samcheok #1~ 2 CSU4 and others	2013.01~2016.06	276,516	70,780	138,977	208,319
Castings & forgings	POSCO and others	Casting, Forging Samcheok LNG	2014.01~2014.12	537,540	449,929	420,920	566,549
Plant construction	Korea Gas Corporation and Others	#5 ~ 7 and others	2010.11~2015.12	698,691	64,605	185,392	577,904
General construction	Hanyang Development Co., Ltd.	Seoul Forest Trimage and others	2013.07~2017.04	1,354,196	230,526	386,802	1,197,920
				<u>13,560,914</u>	<u>5,819,905</u>	<u>5,496,793</u>	<u>13,884,026</u>
Discontinued				<u>(290,395)</u>	<u>290,395</u>	<u>-</u>	<u>-</u>
				<u>₩ 13,270,519</u>	<u>₩ 6,110,300</u>	<u>₩ 5,496,793</u>	<u>₩ 13,884,026</u>

23. Construction contracts (cont'd)

Changes in profit or loss in current and future reporting periods and the book value of due from customers for contracts work (excluding foreign currency translation effect) resulting from changes in total contract revenue and in total estimated contract costs for construction contracts in progress As at December 31, 2015 are as follows:

	Changes in total contract revenue	Changes in total contract cost	Effect on profit(loss) for the year	Effect on profit(loss) for the future	Changes in due from customer for contract work
Power generation	₩ 48,133	₩ 86,582	₩ (64,794)	₩ 26,345	₩ 7,429
Water	71,791	56,082	15,118	591	3,269
Industrial plants	(2,061)	(10,404)	8,298	45	-
Plant construction	51,089	31,377	18,776	936	1,640
General construction	47,300	45,204	8,132	(6,036)	956
	₩ 216,252	₩ 208,841	₩ (14,470)	₩ 21,881	₩ 13,294

Impacts on current and future profit (loss) were calculated based on total contract revenue and cost which were estimated based on the current circumstances as at December 31, 2015. Those estimations may change in the future.

24. Classification of expenses based on nature

Details of classification of expenses based on nature of expenses (cost of sale and administrative expense) for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Changes in inventories	₩ 23,536	₩ 96,324
Purchase of raw materials and goods	2,890,940	2,364,872
Salaries	701,829	829,052
Depreciation & amortization	171,865	158,880

25. 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 millions):

	2015	2014
Salaries	₩ 151,023	₩ 161,123
Severance and retirement benefit	10,510	61,786
Employee welfare benefits	25,693	24,305
Travel	7,636	8,106
Training	12,055	16,271
Taxes and dues	2,826	2,948
Commissions	57,005	69,856
Rents	11,728	11,757
Bad debt expenses	52,912	82,677
Depreciation	7,013	7,012
Amortization	12,196	10,297
Insurance	6,750	8,980
Research	17,904	19,508
Marketing	30,108	28,325
Advertising	24,076	25,123
Others	46,607	54,006
	<u>₩ 476,042</u>	<u>₩ 592,080</u>

26. Finance income and cost

Details of finance income for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Interest income	₩ 8,656	₩ 14,309
Dividend income	3,167	7,527
Gain on foreign currency transactions	146,463	86,619
Gain on foreign currency translation	27,087	21,238
Gain on settlement of derivative financial instruments	233,729	282,072
Gain on valuation of derivative financial instruments	133,249	83,425
Gain on valuation of firm commitment	241,321	122,047
Others	157	214
	<u>₩ 793,829</u>	<u>₩ 617,451</u>

26. Finance income and cost (cont'd)

Details of finance costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Interest expenses	₩	124,061	₩	143,861
Loss on foreign currency transactions		144,516		84,120
Loss on foreign currency translation		85,074		23,764
Loss on redemption of bonds		350		1,272
Loss on settlement of derivative financial instruments		253,451		288,696
Loss on valuation of derivative financial instruments		247,606		217,741
Loss on valuation of firm commitment		57,517		54,976
Others		21,069		13,275
	₩	933,644	₩	827,705

27. Other non-operating income and expense

Details of other non-operating income for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions)

	2015		2014	
Rental income	₩	247	₩	319
Commissions earned		8,475		7,517
Gain on disposal of plant, property and equipment		3,531		2,012
Miscellaneous income and others		5,043		15,845
	₩	17,296	₩	25,693

Details of other non-operating expense for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Loss on disposal of plant, property and equipment	₩	4,834	₩	1,160
Loss on disposal intangible assets		123		63
Other bad debt expenses		128,896		15,263
Donation		12,130		11,134
Loss on disposal of investment in associates and others		-		2,768
Loss on disposal of trade receivables		4,973		14,332
Impairment loss on share of investments in subsidiaries		202,749		-
Impairment loss on plant, property and equipment		-		628
Impairment loss on intangible assets		67,718		12,302
Miscellaneous loss and others		78,396		49,473
	₩	499,819	₩	107,123

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28. Income taxes

The component of income tax expense for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Current income tax	₩ 8,699	₩ 57,299
Changes in deferred tax	134,539	(77,136)
Total income tax expense	143,239	(19,837)
Current income tax related to items recognized in equity during the year	(45)	9
Deferred tax related to items recognized in equity during the year	(86,158)	(3,494)
Income tax related to continuing operations	₩ 57,036	₩ (23,322)

The component of income tax expense and deferred tax related to items recognized in equity for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Net gain on disposal of treasury stock	₩ -	₩ (9)
Net gain on revaluation of land	73,932	-
Unrealized loss on available for sale financial assets, net	(18)	(42)
Net gain on revaluation of cash flow hedges	17,203	9,399
Re-measurement of the net defined benefit liabilities	(4,914)	(5,863)
	₩ 86,203	₩ 3,485

Changes in deferred tax assets (liabilities) for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	January 1	Increase (decrease)	December 31
Provision for retirement and severance benefits	₩ 77,468	₩ 7,815	₩ 85,283
Allowance for doubtful accounts	128,468	41,693	170,161
Property, plant and equipment	11,229	2,849	14,078
Reserve for research and development	(56,110)	14,509	(41,601)
Development costs	39,676	(2,455)	37,221
Derivative financial instruments (included firm commitment assets)	56,098	(28,895)	27,203
Foreign currency denominated assets (liabilities)	1,431	15,267	16,698
Gain on revaluation of land	(343,919)	(73,887)	(417,806)
Others	65,369	(111,435)	(46,066)
	₩ (20,290)	₩ (134,539)	₩ (154,829)

28. Income taxes (cont'd)

	2014		
	January 1,	Increase (decrease)	December 31
Provision for retirement and severance benefits	₩ 60,724	₩ 16,744	₩ 77,468
Allowance for doubtful accounts	104,393	24,075	128,468
Property, plant and equipment	8,124	3,105	11,229
Reserve for research and development	(67,968)	11,858	(56,110)
Development costs	40,455	(779)	39,676
Derivative financial instruments (included firm commitment assets)	39,223	16,875	56,098
Foreign currency denominated assets (liabilities)	887	544	1,431
Gain on revaluation of land	(343,922)	3	(343,919)
Others	60,658	4,711	65,369
	<u>₩ (97,426)</u>	<u>₩ 77,136</u>	<u>₩ (20,290)</u>

The amount of deductible temporary differences for which no deferred tax asset is recognized in the statement of financial position as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Deductible temporary differences	₩ 404,388	₩ 306,815

The probability of deferred tax assets being realized depends on the Company's ability to generate taxable income in future years over which temporary differences are expected to reverse, the economic situation, industry forecast and other various factors. The Company yearically reviews such matters.

Temporary differences related to investment in subsidiaries, associates and joint ventures which are not recognized as deferred tax asset (liability) are as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Investment in subsidiaries	₩ 262,281	₩ (264,924)
Investment in associate or joint ventures	-	1,108
	<u>₩ 262,281</u>	<u>₩ (263,816)</u>

28. Income taxes (cont'd)

Reconciliation of loss before income tax at the Korea statutory tax rate to income tax benefit to the effective income tax rate at the Company as follows (Korean won in millions):

	2015	2014
Loss before income tax	₩ (394,110)	₩ (71,645)
Income tax benefit using the Company's statutory tax rate	(95,375)	(17,338)
Adjustments		
Non-temporary expenses	11,525	4,426
Unrealized deferred tax related to temporary differences	131,971	(2,475)
Tax credit	(1,522)	(5,518)
Others	10,437	(2,417)
Income tax expenses	₩ 57,036	₩ (23,322)
Average effective tax rate (income tax expenses / profit before income tax) (*1)	-	-

(*1) Effective tax rate for the year ended December 31, 2015 and 2014 was not calculated due to loss before income tax.

29. Earnings loss per share

Basic earnings loss per share amounts are calculated by dividing the profit for the year attributable to ordinary equity holders of the Company by the weighted average number of ordinary shares outstanding during the year.

Basic earnings loss per share for years ended December 31, 2015 and 2014 are as follows (Korean won in units):

	2015	2014
Loss for the year	₩ (451,146,063,561)	₩ (48,323,273,945)
Less : preferred stock dividends	12,309,000,165	12,309,000,165
Loss for the year of ordinary shares	(463,455,063,726)	(60,632,274,110)
Weighted-average number of ordinary shares outstanding	98,845,751 shares	98,845,751 shares
Basic earnings loss per share	₩ (4,689)	₩ (613)

Weighted-average number of ordinary shares outstanding for years ended December 31, 2015 and 2014 are as follows (number of shares):

	2015	2014
Issued ordinary shares as at January 1	106,158,256	106,158,256
Effect of treasury stock held	(7,312,505)	(7,312,505)
Weighted average number of ordinary shares outstanding as at December 31	98,845,751	98,845,751

29. Earnings loss per share (cont'd)

Diluted earnings loss per share amounts are calculated on the basis of the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

Diluted earnings loss per share for the years ended December 31, 2015 and 2014 are as follows (Korean won in units):

	2015	2014
Loss for the year	₩ (463,455,063,726)	₩ (60,632,274,110)
Adjustments:		
Adjusted loss for the year	(463,455,063,726)	(60,632,274,110)
Weighted average number of ordinary shares (diluted) outstanding as at December 31,	98,845,751 shares	98,845,751 shares
Diluted earnings loss per share	₩ (4,689)	₩ (613)

Adjusted weighted-average number of ordinary shares outstanding

Adjusted weighted-average number of ordinary shares outstanding for the years ended December 31, 2015 and 2014 are as follows (number of shares):

	2015	2014
Weighted average number of ordinary shares (diluted) outstanding as at December 31	98,845,751	98,845,751
Effect of stock options	-	-
Redeemable convertible preferred shares	-	-
Weighted average number of ordinary shares (diluted) outstanding as at December 31	<u>98,845,751</u>	<u>98,845,751</u>

Parts of stock option and redeemable convertible preferred shares don't dilute earnings per share and it were not included in the calculation of diluted earnings per share. But there can be dilutive effects in the future.

Details of potential ordinary shares, that are potentially dilutive but were not included in the calculation of earnings per share, as there were no dilutive effects for the years ended December 31, 2015 and 2014 are as follows (number of shares):

	2015	2014
Stock option (2006.02.27)	2,600	2,600
Stock option (2007.03.16)	8,600	8,600
Stock option (2008.03.21)	17,400	19,000
Stock option (2009.03.27)	13,200	15,450
Stock option (2010.03.26)	29,600	34,400
Stock option (2011.03.25)	59,900	79,100
Stock option (2012.03.30)	143,200	220,400
Stock option (2013.03.29)	279,900	279,900
Stock option (2014.03.28)	342,300	394,800
Redeemable convertible preferred shares	<u>13,203,540</u>	<u>13,203,540</u>
	<u>14,100,240</u>	<u>14,257,790</u>

30. Commitments and contingencies

(i) Check provided as collateral

As at December 31, 2015, 6 blank checks have been provided as collateral to Incheon-Kimpo Expressway Co., Ltd. in relation with Incheon-Kimpo Expressway SOC construction project and to Hwaseong City Expressway Co., Ltd. in relation with Bibong-Maesong Expressway SOC construction project.

(ii) Operating lease commitments

As at December 31, 2015, the Company's total future minimum lease payments under non-cancellable operating lease contracts are as follows (Korean won in millions):

	Amount	
Less than 1 year	₩	5,641
More than 1 year ~ less than 5 years		23,788
More than 5 years		18,010
	₩	47,439

(iii) As at December 31, 2015, the Company has credit lines for borrowings, bank overdraft and others from financial institutions up to ₩4,264,252 million and used ₩3,136,299 million. As a result, the Company maintains unused credit lines amounting to ₩1,127,953 million.

(iv) As at December 31, 2015, the Company is involved pending lawsuits as a defendant with total claims against the Company amounting to approximately ₩306,572 million. The outcome of such pending lawsuits cannot presently be determined.

(v) As at December 31, 2015, the Company has entered into 13 technical contracts with Mitsubishi Heavy Industries, Ltd. and others and these contracts have been effective from November 27, 1976 to June 4, 2035. For the years ended December 31, 2015 and 2014, royalty payments amounted to ₩6,669 million and ₩12,622 million, respectively.

(vi) As at December 31, 2015, payment guarantees by financial institutions amounting to ₩6,461,562 million have been provided for the Company in connection with domestic and overseas construction projects and others.

(vii) As at December 31, 2015, the Company provides guarantees amounting to ₩164,912 million to customers, who have leased Yong-in Administration Town, for the deposits of contract amount. Also, in relation with return of membership fee, the Company provides guarantees amounting to ₩26,350 million to Club Mow members. In addition, the Company provides guarantees amounting to ₩46,000 million to Keystone Investment and others for purchase commitment of beneficiary certificate.

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30. Commitments and contingencies (cont'd)

(viii) Details of payment guarantees provided by the Company for the subsidiaries and other related parties as at December 31, 2015 are as follows (Korean won in millions, other currencies in thousands):

Guarantee	Currency	Guarantee amount	Exchanged amount in KRW	Guarantee plan	Guarantor
Doosan Hydro Technology Inc.	USD	16,744	₩ 19,624	Construction guarantee	KEB Hana Bank and others
	USD	37,000	43,364	Debt guarantee	JP Morgan and others
HF Controls Corp.	USD	5,000	5,860	Debt guarantee	Shinhan bank
S.C. Doosan IMGB S.A.	EUR	79,000	101,162	Debt guarantee	KDB and others
Doosan Power Systems India Private Ltd.	INR	500,000	8,815	FX guarantee	ICICI Bank and others
	INR	11,376,044	200,560	Construction guarantee	KEB Hana Bank and others
	INR	10,918,284	192,489	Debt guarantee	HSBC and others
Doosan Heavy Industries Vietnam Co., Ltd.	USD	170,696	200,056	Construction guarantee	KEB Hana Bank and others
	USD	204,000	239,088	Debt guarantee	Korea Exim Bank and others
Doosan Babcock Ltd.	GBP	12,910	22,411	Construction guarantee	Ineos- Ethan PJT and others
	GBP	40,000	69,436	Debt guarantee	KBC BANK N.V.
	USD	138,369	162,169	Construction guarantee	Bechtel – Trimble County Garddane PJT- Societe Nationale d'Electricite et de Thermique
Doosan Power Systems S.A.	EUR	150,964	193,314	Construction guarantee	
	EUR	100,000	128,053	Debt guarantee	KDB
	GBP	33,800	58,674	Debt guarantee	KEB Hana Bank and others
Doosan Enpure Ltd.	GBP	57,537	99,880	Construction guarantee	KEB Hana Bank and others
	EUR	16,210	20,758	Construction guarantee	Korea Exim Bank and others
Doosan Engineering & Construction Co., Ltd.	USD	32,601	38,208	Construction guarantee	KEB Hana Bank and others
	USD	162,541	190,498	Construction guarantee	
Doosan Heavy Industries Muscat LLC	USD			Debt guarantee	Haya Water
KDPP 1st Co., Ltd.	KRW	138,000	138,000	Debt guarantee & Supplemental Funding	KDB and others
				Debt guarantee & Supplemental Funding	
Happy Tomorrow 20th Co., Ltd.	KRW	60,000	60,000	Debt guarantee & Supplemental Funding	Shinyoung Securities and others
			₩ 2,192,419		

30. Commitments and contingencies (cont'd)

(ix) As at December 31, 2015, the details of guarantees provided by the Company for developers' project financing are as follows (Korean won in millions):

Type	Project name	Lender	Guarantee period	Guarantee limit	Loan balance	Warranty type
ABCP	Sangdo-dong Doosan We've(2 nd)	Kiwoom Securities and others	2015.11.26~2016.02.26	₩ 70,000	₩ 70,000	Debt assumption
	Hongcheon Mokok CC (Club Mow)	HI Investment Securities and others	2015.04.22~2016.04.19	70,000	70,000	Debt assumption
				<u>140,000</u>	<u>140,000</u>	
Loan	Seoul Forest Trimage	Korea Federation of Community Credit Cooperative and others	2014.04.29~2017.08.29	195,000	195,000	Debt assumption
	Yong-in Administration Town	KDB capital and others	2014.04.18~2016.04.17	55,000	55,000	Debt assumption
	Hongcheon Mokok CC (Club Mow)	SC Bank and others	2015.04.22~2016.04.19	68,000	68,000	Debt assumption
				<u>318,000</u>	<u>318,000</u>	
Short-term Debenture	Sangdo-dong Doosan We've(2 nd)	Kiwoom Securities and others	2015.11.26~2016.02.26	120,000	120,000	Debt assumption
	Seoul Forest Trimage	LIG Securities and others	2014.04.29~2017.08.29	35,000	35,000	Debt assumption
	Yong-in Administration Town	SK Securities	2014.04.18~2016.04.17	30,000	30,000	Debt assumption
	Hongcheon Mokok CC (Club Mow)	Kyobo Securities	2015.04.22~2016.04.19	30,000	30,000	Debt assumption
				<u>215,000</u>	<u>215,000</u>	
				<u>₩ 673,000</u>	<u>₩ 673,000</u>	

(x) Other commitments

As at December 31, 2015, the Company has entered into a contract to assume a liability (limit: ₩155,000 million) if Guarantee, You & me Development Co., Ltd. fails to complete construction of The Land Park Office in Magok district.

(xi) Ordinary wages related contingencies

The Supreme Court of the Republic of Korea ruled that regular bonuses and other employee benefits, which are to be paid on a regular basis, universally applicable, and at fixed term, also fall under the category of ordinary wages. Given that the Supreme Court's ruling is expected to cause an additional financial burden for most companies, the Supreme Court ruled that such additional liability may be exempted from its retroactive obligation, should such liability lead to excessive financial hardship for the entity. In relation to the Supreme Court's ruling, the Company did not recognize any additional provision for the liability as it is not probable that full retroactive payments will be made considering such liability may lead to excessive financial hardship for the Company.

31. Assets pledged as collateral

As at December 31, 2015, assets that have been pledged as collateral for the Company's borrowings and others are as follows (Korean won in millions):

<u>Collateralized asset</u>	<u>Collateralized amount</u>	<u>Amount of borrowings and others</u>	<u>Pledgee</u>
Land, buildings, equipment and others	₩ 602,499	₩ 565,216	KDB

As at December 31, 2015, shares of Incheon-Kimpo Expressway Co., Ltd. with the book value of ₩14,240 million and shares of Hwaseong City Expressway Co., Ltd. with the book value of ₩9,578 million are pledged for the project financing of those entities to Kookmin Bank and others.

As at December 31, 2015, the Company and Korea Exim Bank have made a stock exchange contract regarding hybrid equity instruments issued by Doosan Power Systems S.A., a subsidiary of the Company. Under the contract, the Korea Exim Bank has a right to convert hybrid equity instruments into ordinary share of the Company. As the Korea Exim Bank exercise right, the Company has options to i) convert hybrid equity instruments (USD19.1 of face value) to ordinary share (one share) ii) pay in cash (amounting to issuance price USD 300,000,000). In this regard, the Company provided 75,509,366 shares of DI stock and 29,650,000 shares of DE stock as collateral.

32. Related party disclosures

The related parties of the Company and nature of their relationship with the Company as at December 31, 2015 are as follows:

- (1) As at December 31, 2015, the Company's ultimate parent company is Doosan Corp. (equity ownership : 36.82%).

32. Related party disclosures(cont'd)

(2) As at December 31, 2015, the details of the Company's subsidiaries are as follows:

Related party	Equity ownership (%) (*1)	
	2015	2014
Doosan Asset Management Company Co., Ltd.	100.00	100.00
Doosan Hydro Technology Inc.	100.00	100.00
Doosan Heavy Industries Vietnam Co., Ltd.	100.00	100.00
HF Controls Corp.	100.00	100.00
PT. Doosan Heavy Industries Indonesia	55.00	55.00
Doosan Engineering & Services LLC	100.00	100.00
Doosan Heavy Industries America Corp.	100.00	100.00
Doosan Heavy Industries Japan Corp.	100.00	100.00
Doosan ATS America, LLC	100.00	100.00
S.C. Doosan IMGB S.A.	99.85	99.85
Doosan Power Systems India Private Ltd.	100.00	100.00
Doosan Enpure Ltd.	100.00	100.00
Doosan Heavy Industries America Holdings Inc.	100.00	100.00
Doosan Skoda Power s.r.o	100.00	100.00
Skoda Power Private Ltd.	100.00	100.00
Doosan Power Systems Pension Trustee Company Co., Ltd.	100.00	100.00
Doosan Power Systems Overseas Investments Ltd.	100.00	100.00
Doosan Babcock Ltd.	100.00	100.00
Doosan Power Systems Holdings Ltd.	100.00	100.00
Doosan Power Systems Europe Limited GmbH	100.00	100.00
Doosan Power Systems Czech Investments a.s. (*2)	-	100.00
Doosan Power Systems Americas LLC	100.00	100.00
Doosan Lentjes UK Limited	100.00	100.00
Doosan Lentjes GmbH	99.04	99.04
Doosan Power Systems S.A. ("DPS S.A.")	100.00	100.00
Doosan Babcock Energy Technologies (Shanghai) Ltd.	100.00	100.00
Doosan Babcock Energy Services (Overseas) Ltd.	100.00	100.00
Doosan Babcock Energy Polska Sp z.o.o.	98.91	98.91
Doosan Babcock Energy Germany GmbH	100.00	100.00
Doosan Babcock General Maintenance Services LLC	49.00	49.00
Doosan Babcock WLL	49.00	49.00
Doosan Lentjes Czech s.r.o	100.00	100.00
AE & E Lentjes Belgie N.V.	100.00	100.00
Doosan Power Systems(Scotland) Limited Partnership	100.00	100.00
Doosan Construction Site Solutions Vietnam Company Limited	100.00	100.00
Doosan Heavy Industries Muscat LLC (*3)	70.00	-
Doosan HF Controls Asia Co., Ltd. (*3)	100.00	-
Doosan Power Systems Arabia (*3)	51.00	-
KDPP 1st Co., Ltd. (*3)	-	-
Happy Tomorrow 20th Co., Ltd. (*3)	-	-
Doosan Infracore Co., Ltd. and its subsidiaries	36.40	36.40
Doosan Engineering & Construction Co., Ltd. and its subsidiaries	80.01	84.29
Doosan Engine Co., Ltd. and its subsidiary	42.66	42.66

(*1) The number represents addition of the investment own by DHIC and its subsidiaries.

(*2) Liquidated during the year 2015.

(*3) Included in subsidiaries during the year 2015.

32. Related party disclosures (cont'd)

(3) The associates and joint ventures and other related parties of the Company and nature of their relationship with the Company as at December 31, 2015 are as follows:

Control relationship	Related party
Parent	Doosan Corp.
Associates and joint ventures (*1)	Tamra Offshore Wind Power Co., Ltd., Haman Industrial Complex Company,
Others:	
Subsidiaries of the parent company	Doosan Tower Co., Ltd., Oricom Inc., Hancorn Co., Ltd., Doosan DST Co., Ltd., Doosan Bears Inc., Doosan Advertising (Beijing) Co., Ltd., Doosan Feed & Livestock Co., Ltd., DIP Holdings Co., Ltd., DRA Co., Ltd., Doosan Real Estate Securitization Specialty Co., Ltd., Doosan 2nd Real Estate Securitization Specialty Co., Ltd., Doosan Hongkong Ltd.(DSH), Doosan Shanghai Chemical Limited, Doosan Electro-Materials Singapore Pte Ltd.("DSES"), Doosan Electro-Materials (Changshu) Co., Ltd., Doosan Electro-Materials America, LLC, Doosan Electro-Materials Luxembourg Sarl, Doosan Electro-Materials(Shen Zhen) Limited, Doosan Information and Communications America LLC, Doosan Information and Communications China Co., Ltd., Doosan Information and Communications Europe Ltd., Doosan Industrial Vehicle Europe N.A., Doosan Industrial Vehicle U.K. Ltd., Doosan Industrial Vehicle America Corp., Doosan Industrial Vehicle Yantai Co., Ltd., Doosan Logistics Europe GmbH, Doosan Mottrol (Jiangyin) Co., Ltd., Doosan Fuel Cell America Inc., Circuit Foil Luxembourg Sarl and others
Associates and joint ventures of the parent company (*3)	Guang Dong Xingpu Steel Center, Doosan Eco Biz Net Co., Ltd., Prestoliteasia Co., Ltd., Sichuan Kelun-Doosan Biotechnology Company Limited,
Others (*2)	Doosan Power Systems Pension Scheme, Doosan Credit Union, Yonkang Foundation, Chung-Ang University, Neoplux Co., Ltd., Dongdaemoon Miraechangcho Foundation, Kyunggi Railroad Co., Ltd., Shinbundang Railroad Co., Ltd., Doosan PSI LLC, Dalian Samyoung Doosan Metal Product Co.,Ltd., Neo Trans Co., Ltd., New Seoul Railway Corporation, Xuzhou Xugong Doosan Engine Co., Ltd. and others

(*1) Included associates and joint ventures of the Company's subsidiaries

(*2) Doosan do BPL and Doosan Capital Co., Ltd. was excluded resulting from liquidation and disposal, respectively and Doosan (China) Financial Leasing Corp was changed from associates to subsidiaries

(*3) MVP Venture Capital 13rd was liquidated during the year.

Doosan Heavy Industries & Construction Co., Ltd.
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32. Related party disclosures (cont'd)

Significant transactions (excluding financial and investment) with related parties for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

Related party		2015				
		Sales and others		Purchases and others		
		Sales	Other revenue	Purchases	Acquisition of property, plant and equipment and intangible assets	Other expense
Parent:	Doosan Corp.	₩ 4	₩ 183	₩ 39,208	₩ 78,015	₩ 39,867
Subsidiaries:	Doosan Heavy Industries Vietnam Co., Ltd.	9,050	1,134	192,191	-	-
	Doosan Hydro Technology Inc.	-	199	9,301	-	-
	Doosan Heavy Industries America Corp.	-	-	58	-	3,622
	Doosan Heavy Industries Japan Corp.	-	-	42	-	2,943
	S.C Doosan IMGB S.A	-	588	41,114	-	11
	Doosan Power Systems India Private Ltd.	30,918	637	5,111	-	14
	Doosan Enpure Ltd.	-	29	6,862	-	-
	Doosan Babcock Ltd.	-	1,325	36,299	-	-
	Doosan Skoda Power s.r.o	-	-	5,210	-	-
	Doosan Equipment Rental Vietnam Co., Ltd.	-	5	3,251	-	-
	Doosan ATS America, LCC	-	12	5,154	-	681
	Doosan Engine Co., Ltd.	86,314	19	-	-	-
	Doosan Infracore Co., Ltd.	-	12	2,944	-	-
	Doosan Engineering & Construction Co., Ltd	2,904	3,455	61,713	20,283	547
	Doosan Cuvex Co., Ltd.	-	-	6,678	12,944	822
	Others	59	1,828	4,473	-	376
		<u>129,245</u>	<u>9,243</u>	<u>380,401</u>	<u>33,227</u>	<u>9,016</u>
Associates and joint ventures:	Haman Industrial Complex Company	-	215	-	-	-
	Tamra Offshore Wind Power Co., Ltd.	63,443	-	2	-	-
		<u>63,443</u>	<u>215</u>	<u>2</u>	<u>-</u>	<u>-</u>
Others:	Oricom Inc.	-	-	-	-	9,496
	Chung-Ang University	-	-	1,071	40	5,806
	Doosan Bears Inc.	-	-	-	-	7,883
	Others	2,014	-	884	-	1,124
		<u>2,014</u>	<u>-</u>	<u>1,955</u>	<u>40</u>	<u>24,309</u>
		<u>₩ 194,706</u>	<u>₩ 9,641</u>	<u>₩ 421,566</u>	<u>₩ 111,282</u>	<u>₩ 73,192</u>

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32. Related party disclosures (cont'd)

Related party		2014						
		Sales and others		Purchases and others				
		Sales	Other revenue	Purchases	Acquisition of property, plant and equipment and intangible assets	Other expense		
Parent:	Doosan Corp.	₩ -	₩ 520	₩ 32,139	₩ -	₩ 52,783		
Subsidiaries:	Doosan Heavy Industries Vietnam Co., Ltd.	6,981	1,427	134,647	-	-		
	Doosan Hydro Technology Inc.	-	132	5,913	-	-		
	Doosan Engineering & Services LLC	-	-	5,507	-	-		
	Doosan Heavy Industries America Corp.	-	-	-	-	3,769		
	S.C Doosan IMGB S.A	-	706	26,286	-	-		
	Doosan Power Systems India Private Ltd.	202,750	541	383	-	-		
	Doosan Babcock Ltd.	-	-	31,472	-	-		
	Doosan Skoda Power s.r.o	-	-	11,965	-	-		
	Doosan Enpure Ltd.	-	33	6,654	-	-		
	Doosan Engine Co., Ltd.	103,227	-	13	-	-		
	Doosan Engineering & Construction Co., Ltd.	5,685	2,351	30,808	-	779		
	Doosan Cuvex Co., Ltd.	-	-	6,539	5,043	1,163		
	Others	31	2,589	5,969	-	2,935		
			<u>318,674</u>	<u>7,779</u>	<u>266,156</u>	<u>5,043</u>	<u>8,646</u>	
	Associates and joint ventures:	Haman Industrial Complex Company	248	-	-	-	-	
		Tamra Offshore Wind Power Co., Ltd.	-	-	4	-	-	
			248	-	4	-	-	
Others:	Oricom Inc.	-	-	-	-	6,769		
	Doosan DST Co., Ltd.	3,606	-	-	-	-		
	Chung-Ang University	-	-	955	-	7,474		
	Doosan Bears Inc.	-	-	-	-	10,307		
	Others	1,601	-	1,806	-	2,112		
		<u>5,207</u>	<u>-</u>	<u>2,761</u>	<u>-</u>	<u>26,662</u>		
		<u>₩ 324,129</u>	<u>₩ 8,299</u>	<u>₩ 301,060</u>	<u>₩ 5,043</u>	<u>₩ 88,091</u>		

Doosan Heavy Industries & Construction Co., Ltd.
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32. Related party disclosures (cont'd)

The outstanding receivables and payables arising from the transactions (excluding investments and dividends) with related parties as at December 31, 2015 and 2014 are as follows (Korean won in millions):

Related party		2015						
		Receivables			Payables			
		Accounts receivable	Other receivable	Loans	Accounts payable	Other payable	Debt	
Parent:	Doosan Corp.	₩ 46	₩ 176	₩ -	₩ 8,910	₩ 57,678	₩ -	
Subsidiaries:	Doosan Heavy Industries Vietnam Co., Ltd.	6,064	28,671	-	62,581	-	-	
	PT. Doosan Heavy Industries Indonesia(*1)	-	-	64,303	-	-	-	
	Doosan Heavy Industries America Corp.	-	-	-	17,901	1,224	-	
	Doosan Heavy Industries Japan Corp.	-	580	-	13,460	540	-	
	Doosan Power Systems India Private Ltd.	118,150	421	-	2,176	14	-	
	Doosan Hydro Technologies Inc.	-	142	-	6,184	-	-	
	S.C Doosan IMGB S.A	-	2,290	-	3,857	-	-	
	Doosan Babcock Ltd.	-	6,129	-	33,801	-	-	
	Doosan Skoda Power s.r.o	-	328	-	7,169	-	-	
	Doosan Heavy Industries America Holdings Inc.	395	-	33,402	-	-	-	
	Doosan Engineering & Construction Co., Ltd.	26,949	15,469	-	58,390	6,221	-	
	Doosan Cuvex Co., Ltd.	-	4,877	-	-	660	-	
	Happy Tomorrow 20th Co., Ltd.	-	-	-	-	-	50,000	
	KDPP 1st Co., Ltd.	-	-	-	-	-	115,000	
	Others	1,587	4,858	-	4,674	-	-	
			<u>153,145</u>	<u>63,756</u>	<u>97,705</u>	<u>210,193</u>	<u>8,659</u>	<u>165,000</u>
	Associates and joint ventures:	Haman industrial Complex Company	2,025	5,929	-	-	-	-
		Tamra Offshore Wind Power Co., Ltd.	63,126	-	-	-	12,795	-
			<u>65,151</u>	<u>5,929</u>	<u>-</u>	<u>-</u>	<u>12,795</u>	<u>-</u>
Related parties:	Oricom Inc.	-	-	-	7,302	-	-	
	Others	521	552	-	86	312	-	
		<u>521</u>	<u>552</u>	<u>-</u>	<u>7,388</u>	<u>312</u>	<u>-</u>	
		<u>₩ 218,863</u>	<u>₩ 70,422</u>	<u>₩ 97,705</u>	<u>₩ 226,491</u>	<u>₩ 79,444</u>	<u>₩ 165,000</u>	

Doosan Heavy Industries & Construction Co., Ltd.
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32. Related party disclosures (cont'd)

(*1) As at December 31, 2015, the Company provided the allowance for doubtful accounts for total of the loan considering the possibility of collection.

Related party		2014				
		Receivables			Payables	
		Accounts receivable	Other receivable	Loan(*1)	Accounts payable	Other payable
Parent:	Doosan Corp.	₩ 132	₩ 414	₩ -	₩ 13,071	₩ 4,713
Subsidiaries:	Doosan Heavy Industries Vietnam Co., Ltd.	58	33,059	-	4,969	3,459
	PT. Doosan Heavy Industries Indonesia(*1)	-	-	64,303	-	-
	Doosan Engineering & Services LLC	-	-	-	3,297	-
	Doosan Heavy Industries America Corp.	-	-	-	24,975	303
	Doosan Heavy Industries Japan Corp.	-	1,157	-	24,805	-
	Doosan Power Systems India Private Ltd.	187,486	2,031	-	18,707	-
	Doosan Babcock Ltd.	-	5,676	-	13,562	-
	Doosan Power system S.A.	-	3,369	-	-	-
	Doosan Engine Co., Ltd.	8,354	3	-	-	-
	Doosan Engineering & Construction Co., Ltd.	2,012	42,433	-	10,079	1,549
	Doosan Cuvex Co., Ltd.	-	5,124	-	1	661
	Others	-	4,854	-	8,174	21
			<u>197,910</u>	<u>97,706</u>	<u>64,303</u>	<u>108,569</u>
Associates and joint ventures:	Haman Industrial Complex Company	6,225	5,921	-	-	-
Related parties:	Oricom Inc.	-	-	-	4,047	-
	Others	<u>652</u>	<u>707</u>	<u>-</u>	<u>208</u>	<u>77</u>
		<u>652</u>	<u>707</u>	<u>-</u>	<u>4,255</u>	<u>77</u>
		<u>₩ 204,919</u>	<u>₩ 104,748</u>	<u>₩ 64,303</u>	<u>₩ 125,895</u>	<u>₩ 10,783</u>

(*1) As at December 31, 2014, the Company provided the allowance for doubtful accounts for total of the loan considering the possibility of collection.

Doosan Heavy Industries & Construction Co., Ltd.
Notes to the separate financial statements
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32. Related party disclosures (cont'd)

Financial transactions (including investment) with related parties for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

		2015							
		Loans		Debts		Investments		Dividends	
Related party		Increase	Decrease	Increase	Decrease	Capital increase	Investment	Income	Payment
Parent:	Doosan Corp.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 32,959
Subsidiaries:	Doosan Heavy Industries America Corp.	33,402	-	-	-	-	3,960	-	-
	Doosan Engineering & Construction Co., Ltd.	-	-	-	-	-	-	2,326	-
	Doosan Infracore America Corporation	-	-	-	-	-	-	-	2,149
	Doosan Heavy Industries Muscat LLC	-	-	-	-	-	319	-	-
	Doosan Power Systems Arabia	-	-	-	-	-	2,039	-	-
	Happy Tomorrow 20th Co., Ltd.	-	-	50,000	-	-	-	-	-
	KDPP 1st Co., Ltd.	-	-	115,000	-	-	-	-	-
		<u>33,402</u>	<u>-</u>	<u>165,000</u>	<u>-</u>	<u>-</u>	<u>6,318</u>	<u>2,326</u>	<u>2,149</u>
		<u>₩ 33,402</u>	<u>₩ -</u>	<u>₩ 165,000</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 6,318</u>	<u>₩ 2,326</u>	<u>₩ 35,108</u>
		2014							
		Loans		Investments		Dividends			
Related party		Increase	Decrease	Capital increase	Investment	Income	Payment		
Parent:	Doosan Corp.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 32,959
Subsidiaries:	Doosan Asset Management Company Co., Ltd.	-	-	-	-	-	-	3,300	-
	HF Controls Corp.	-	-	-	-	-	-	2,637	-
	S.C Doosan IMGB S.A.	-	-	-	45,338	-	-	-	-
	Doosan Heavy Industries America Holdings Inc.	10,506	10,506	-	91,200	-	-	-	-
	Doosan Infracore America Corporation	-	-	85,640	-	-	-	-	-
		<u>10,506</u>	<u>10,506</u>	<u>85,640</u>	<u>136,538</u>	<u>5,937</u>	<u>-</u>	<u>-</u>	<u>-</u>
Associates and joint ventures:	Hanjung Power Ltd.	-	-	-	-	-	-	1,494	-
		<u>₩ 10,506</u>	<u>₩ 10,506</u>	<u>₩ 85,640</u>	<u>₩ 136,538</u>	<u>₩ 7,431</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 32,959</u>

The Company provides payment guarantees and collateral certain related parties as at December 31, 2015 (See Notes 30 and 31).

Key management personnel are standing directors who have authorities and responsibilities for planning, operation and control of the business of the Company. Compensation for key management personnel for the years ended December 31, 2015 and 2014 consists of following (Korean won in millions):

	2015	2014
Short-term employee benefits	₩ 45,398	₩ 54,456
Severance and retirement benefits	3,595	4,044
Share-based payment	985	2,681
	<u>₩ 49,978</u>	<u>₩ 61,181</u>

Doosan Heavy Industries & Construction Co., Ltd.
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33. Supplementary cash flow information

Details of non-cash and working capital adjustments to reconcile profit for the year ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Loss for the year	₩ (451,146)	₩ (48,323)
Adjustments:	873,627	575,289
Interest expenses	124,061	143,861
Loss on foreign currency translation	85,074	23,764
Bad debt expenses	52,912	82,677
Other bad debt expenses	128,896	15,263
Loss on valuation of derivative financial instruments	247,606	217,741
Loss on valuation of firm commitments	57,517	54,976
Depreciation	104,395	108,555
Amortization of intangible assets	67,470	50,325
Income tax expense (benefit)	57,036	(23,322)
Severance and retirement benefits	45,286	95,967
Share-based payments	985	2,681
Loss on (reversal of) valuation of inventories	1,720	(410)
Loss on disposal of property, plant and equipment	4,834	1,160
Loss on disposal of intangible assets	123	63
Loss on redemption of bonds	350	1,272
Loss on disposal of share of investments in associates	-	2,768
Impairment loss on intangible assets	67,718	12,302
Impairment loss on available-for-sale financial assets	587	3,185
Impairment loss on property, plant and equipment	-	628
Provision for construction warranties	9,493	5,994
Impairment loss on share of investments in subsidiaries	202,749	-
Loss on disposal of long-term investment securities	1,004	875
Interest income	(8,656)	(14,309)
Dividend income	(3,167)	(7,527)
Gain on foreign currency translation	(27,087)	(21,238)
Gain on valuation of derivatives financial instruments	(133,249)	(83,425)
Gain on valuation of firm commitments	(241,321)	(122,047)
Gain on disposal of plant, property and equipment	(3,531)	(2,012)
Gain on disposal of share of investments in associates and others	-	(213)
Gain on disposal of Long-term investments in securities	(98)	-
Gain on disposal of non-current assets classified as held-for-sale	-	(7,249)
Others	30,920	32,984
Working capital adjustments:	(527,329)	32,333
Trade receivables	(62,431)	(41,870)
Due from customers for contract work	(394,620)	269,206
Other receivables	(27,641)	16,505
Prepayments	16,721	(63,357)
Inventories	21,816	96,733
Derivative financial assets and liabilities	(24,374)	55,857
Firm commitments assets and liabilities	80,244	(121,428)
Trade payables	54,645	238,492
Other payables	(34,224)	(280)
Advanced receipts	(37,115)	41,019
Due to customers for contract work	2,613	(336,552)
Accrued expenses	(2,715)	(10,131)
Severance payments paid	(48,027)	(17,104)
Plan assets	(51,599)	(61,473)
Others	(20,622)	(33,284)
Cash generated from operating activities	₩ (104,848)	₩ 559,299

33. Supplementary cash flow information (cont'd)

Significant transactions not involving cash flows for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Transfer of current portion of debentures and borrowings	₩ 925,528	₩ 1,215,795
Transfer from construction-in-progress to property, plant and equipment and intangible assets	107,668	67,258
Transfer of current portion of long-term financial instruments	50,417	-
Acquisition of property, plant and equipment included in the other payables	58,921	-

34. Approval of the financial statements

The separated financial statements of the Company for the year ended December 31, 2015 were approved by the Company's Board of Directors at their meeting on February 4, 2016 and will be presented to the annual shareholders' meeting on March 25, 2016.

Independent auditors' review report on internal control over financial reporting

The Chief Executive Officer
Doosan Heavy Industries & Construction Co., Ltd.

We have reviewed the accompanying management's report on the operations of the internal control over financial reporting ("ICFR") of Doosan Heavy Industries & Construction Co., Ltd. (the "Company") as of December 31, 2015. The Company's management is responsible for the design and operations of its ICFR, including the reporting of its operations. Our responsibility is to review management's ICFR report and issue a report based on our review. Management's report on the operations of the ICFR of the Company states that "Based on the assessment of the operations of the ICFR, the Company's ICFR has been effectively designed and has operated as of December 31, 2015, in all material respects, in accordance with the ICFR standard."

We conducted our review in accordance with the ICFR review standards established by the Korean Institute of Certified Public Accountants. These standards require that we plan and perform our review to obtain less assurance than an audit as to management's report on the operations of the ICFR. A review includes the procedures of obtaining an understanding of the ICFR, inquiring as to management's report on the operations of the ICFR and performing a review of related documentation within limited scope, if necessary.

A company's ICFR consists of an establishment of related policies and organization to ensure that it is designed to provide reasonable assurance on the reliability of financial reporting and the preparation of financial statements for external financial reporting purposes in accordance with K-IFRS. However, because of its inherent limitations, the ICFR may not prevent or detect material misstatements of the financial statements. Also, projections of any assessment of the ICFR on future periods are subject to the risk that ICFR may become inadequate due to the changes in conditions, or that the degree of compliance with the policies or procedures may be significantly reduced.

Based on our review of management's report on the operations of the ICFR, nothing has come to our attention that causes us to believe that management's report referred to above is not presented fairly, in all material respects, in accordance with the ICFR standards.

We conducted our review of the ICFR in place as of December 31, 2015, and we did not review the ICFR subsequent to December 31, 2015. This report has been prepared for Korean regulatory purposes pursuant to the Act on External Audit for Stock Companies, and may not be appropriate for other purposes or for other user.

Ernst & Young Han Young

March 17, 2016

This report is annexed in relation to the audit of the financial statements as of December 31, 2015 and the review of internal accounting control system pursuant to Article 2-3 of the Act on External Audit for Stock Companies of the Republic of Korea.

Management's assessment of internal control over financial reporting

The Board of Directors and Internal auditor (Audit Committee) of Doosan Heavy Industries & Construction Co., Ltd.

I, as the internal control over financial reporting officer ("ICFR Officer") of Doosan Heavy Industries & Construction Co., Ltd. ("the Company"), assessed the status of the design and operations of the Company's internal control over financial reporting ("ICFR") for the year ended December 31, 2015.

The Company's management including the ICFR Officer is responsible for the design and operations of its ICFR. I, as the ICFR Officer, assessed whether the ICFR has been effectively designed and has operated to prevent and detect any error or fraud which may cause any misstatement of the financial statements, for the purpose of establishing the reliability of financial reporting and the preparation of financial statements for external financial reporting purposes. I, as the ICFR Officer, applied the ICFR standards for the assessment of design and operations of the ICFR.

Based on the assessment of the operations of the ICFR, the Company's ICFR has been effectively designed and has operated as of December 31, 2015, in all material respects, in accordance with the ICFR standard.

February 4, 2016

Myung-Ho Jang,
Internal Control over Financial Reporting Officer

Gee Won Park,
Chief Executive Officer and President