



# Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries

## Consolidated 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 consolidated financial statements of Doosan Heavy Industries & Construction Co., Ltd. (the "Company") and its subsidiaries (collectively, the "Group"), which comprise the consolidated statements of financial position as at December 31, 2015 and 2014, and the consolidated statements of profit or loss, consolidated statements of comprehensive income or loss, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of these consolidated 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 consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditors' Responsibility**

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

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

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

### Opinion

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

*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 auditors' report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modification to this report.

**Doosan Heavy Industries & Construction Co., Ltd.**  
**and its subsidiaries**

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

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

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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated statements of financial position**  
**as at December 31, 2015, 2014**

(Korean won in units)

	Notes	December 31, 2015	December 31, 2014
<b>Assets</b>			
Current assets:			
Cash and cash equivalents	4, 5, 10	₩ 1,893,007,747,878	₩ 1,297,560,213,962
Short-term financial instruments	4, 5, 10, 34	475,822,932,100	591,481,515,302
Short-term investments			
in securities	4, 6, 10	440,994,129	31,385,470,088
Trade receivables, net	4, 7, 10, 26, 34, 35	2,512,793,814,167	2,564,431,426,660
Due from customers			
for contract work, net	7, 26	1,898,305,160,818	2,035,389,942,663
Other receivables, net	4, 7, 10, 35	389,866,374,113	331,073,026,441
Prepayments	7	617,000,416,576	623,678,714,210
Prepaid expenses		80,051,592,909	97,716,964,385
Short-term loans, net	4, 7, 10, 35	178,384,058,498	541,593,602,039
Derivative financial assets	4, 9, 10	24,409,004,032	37,340,410,136
Firm commitment assets	9	111,500,155,075	64,068,051,449
Inventories, net	8, 34	2,196,491,764,508	2,331,909,520,735
Other current assets	4, 7, 10	227,111,159,002	264,712,483,766
Non-current assets classified			
as held-for-sale	37	119,220,470,226	-
Total current assets		<u>10,724,405,644,031</u>	<u>10,812,341,341,836</u>
Non-current assets:			
Long-term financial instruments	4, 5, 10	77,402,476,564	84,712,208,686
Long-term investments			
in securities	4, 6, 10, 34	190,420,094,063	187,942,074,247
Share of investments in			
associates and joint ventures	11, 34	62,411,138,388	226,744,904,296
Long-term loans, net	4, 7, 10, 35	1,019,229,605,248	719,430,932,517
Property, plant and equipment, net	12, 34	7,206,578,365,565	7,190,139,774,839
Intangible assets, net	13	6,657,774,324,948	6,863,345,310,432
Investment properties	14, 34	30,516,385,496	68,163,327,038
Derivative financial assets	4, 9, 10	63,996,129,207	27,913,927,369
Firm commitment assets	9	73,771,115,605	56,626,716,041
Guarantee deposits, net	4, 5, 7, 10	253,322,937,601	309,024,141,234
Deferred tax assets	31	782,988,943,041	944,406,898,458
Other non-current assets	4, 7, 10	117,323,450,501	61,114,955,310
Total non-current assets		<u>16,535,734,966,227</u>	<u>16,739,565,170,467</u>
<b>Total assets</b>		<u>₩ <b>27,260,140,610,258</b></u>	<u>₩ <b>27,551,906,512,303</b></u>

(Continued)

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

(Korean won in units)

	Notes	December 31, 2015	December 31, 2014
<b>Liabilities and equity</b>			
Current liabilities:			
Trade payables	4, 10, 35	₩ 2,259,960,866,728	₩ 2,691,130,566,041
Short-term borrowings	4, 10, 15, 34	3,943,165,035,852	2,967,464,808,128
Asset-backed loans	4, 10, 15	394,044,438,739	397,347,705,208
Other payables	4, 10, 35	797,731,063,373	720,622,823,183
Advanced received		346,939,985,983	361,265,911,412
Due to customers for contract work	26	1,200,598,386,238	1,120,201,735,582
Withholdings		84,990,443,174	116,998,812,277
Accrued expenses	4, 10	579,421,166,491	488,643,525,511
Income tax payable		35,923,644,791	69,207,517,934
Current portion of long-term debt	4, 10, 15, 34	2,252,663,857,555	1,631,163,514,293
Derivative financial liabilities	9, 10	217,439,689,022	185,685,205,347
Firm commitment liabilities	9	16,325,825,501	65,365,984,651
Other provisions	17	130,417,938,027	137,223,875,500
Other current liabilities	4, 10	195,873,537,768	179,750,645,637
Total current liabilities		12,455,495,879,242	11,132,072,630,704
Non-current liabilities:			
Debentures	4, 10, 15, 34	2,547,984,215,918	3,009,799,381,248
Long-term borrowings	4, 10, 15, 34	3,282,290,330,730	3,597,626,371,249
Long-term asset-backed loans	4, 10, 15	150,408,282,978	42,677,714,962
Long-term other payables	4, 10	41,882,360,478	51,247,058,484
Employee benefits liability	16	900,192,936,968	1,020,609,311,678
Deposits received	4, 10	152,617,695,614	223,675,032,387
Derivative financial liabilities	9, 10	147,638,954,643	128,730,391,781
Firm commitment liabilities	9	28,734,919,118	26,648,783,925
Deferred tax liabilities	31	118,224,240,213	82,460,285,676
Other provisions	17	244,242,092,508	237,747,776,849
Other non-current liabilities	4, 10	164,321,029,716	321,610,053,428
Total non-current liabilities		7,778,537,058,884	8,742,832,161,667
<b>Total liabilities</b>		<b>20,234,032,938,126</b>	<b>19,874,904,792,371</b>
<b>Equity:</b>			
Issued capital	1, 18	596,808,980,000	596,808,980,000
Capital surplus	19	1,563,917,672,526	1,828,284,636,585
Other components of equity	20	(105,157,160,978)	(101,795,674,821)
Accumulated other comprehensive income	6, 9, 10, 21	512,011,506,902	220,918,859,061
Retained earnings	22	1,013,088,220,397	2,115,202,768,057
<b>Equity attributable to equity holders of the parent</b>		<b>3,580,669,218,847</b>	<b>4,659,419,568,882</b>
Hybrid equity instruments	23	841,695,963,991	508,259,603,649
Other non-controlling interests	23	2,603,742,489,294	2,509,322,547,401
Non-controlling interests		3,445,438,453,285	3,017,582,151,050
<b>Total equity</b>		<b>7,026,107,672,132</b>	<b>7,677,001,719,932</b>
<b>Total liabilities and equity</b>		<b>₩ 27,260,140,610,258</b>	<b>₩ 27,551,906,512,303</b>

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

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

(Korean won in units)

	Notes	2015	2014
<b>Revenue</b>	24, 25, 26, 35	₩ 16,204,318,150,763	₩ 17,971,644,255,839
Cost of sales	26, 27, 35	13,646,660,617,300	14,903,359,919,907
<b>Gross profit</b>		<b>2,557,657,533,463</b>	<b>3,068,284,335,932</b>
Selling and administrative expenses	10, 27, 28	2,495,591,387,773	2,190,177,562,750
<b>Operating profit</b>	24	<b>62,066,145,690</b>	<b>878,106,773,182</b>
Finance income	10, 29	1,236,190,085,496	922,501,649,469
Finance costs	10, 29	1,955,240,535,134	1,774,300,682,583
Other non-operating income	10, 30	95,823,099,160	127,761,681,063
Other non-operating expenses	10, 30	915,042,029,100	279,269,541,575
Share of loss in associates and joint ventures	11	(81,659,482,860)	(79,859,494,062)
<b>Loss before tax from continuing operations</b>		<b>(1,557,862,716,748)</b>	<b>(205,059,614,506)</b>
Income tax expense (benefit)	31	167,893,229,951	(104,804,644,013)
<b>Loss from continuing operations</b>	24	<b>(1,725,755,946,699)</b>	<b>(100,254,970,493)</b>
<b>Profit (loss) from discontinued operations</b>	38	<b>(25,143,382,810)</b>	<b>14,779,623,313</b>
<b>Loss for the year</b>		<b>(1,750,899,329,509)</b>	<b>(85,475,347,180)</b>
Attributable to:			
Equity holders of the parent		(1,038,543,220,644)	(94,675,179,547)
Non-controlling interests		(712,356,108,865)	9,199,832,367
		<u>₩ (1,750,899,329,509)</u>	<u>₩ (85,475,347,180)</u>
<b>Earnings (loss) per share:</b>			
<b>- Basic, loss for the year attributable to ordinary equity holders of the parent</b>	32	₩ (10,631)	₩ (1,082)
Loss for the year			
from continuing operations		(10,427)	(1,209)
Profit (loss) for the year			
from discontinued operations		(204)	127
<b>- Diluted, loss for the year attributable to ordinary equity holders of the parent</b>	32	₩ (10,631)	₩ (1,082)
Loss for the year			
from continuing operations		(10,427)	(1,209)
Profit (loss) for the year			
from discontinued operations		(204)	127

(Continued)



**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated 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>
<b>Loss for the year</b>		₩ (1,750,899,329,509)	₩ (85,475,347,180)
<b>Other comprehensive income (loss)</b>		<b>319,962,397,817</b>	<b>(339,645,498,514)</b>
<i>Items that will not be reclassified to profit or loss in subsequent periods:</i>			
Remeasurement of the net defined benefit liabilities	16	18,841,106,569	(110,461,283,972)
Net gain (loss) on revaluation of land	12	359,747,810,598	(192,140,659)
		<u>378,588,917,167</u>	<u>(110,653,424,631)</u>
<i>Items that may be reclassified to profit or loss in subsequent periods:</i>			
Net change in unrealized fair value of available-for-sale financial assets	6,10	(3,104,626,549)	1,496,857,115
Effective portion of changes in fair value of cash flow hedges	9,10	12,063,776,264	(3,822,332,135)
Equity adjustments in equity method (debit)	11	1,340,919,348	(2,626,931)
Net loss on translation of foreign operations		(68,926,588,413)	(226,663,971,932)
		<u>(58,626,519,350)</u>	<u>(228,992,073,883)</u>
<b>Total comprehensive loss, net of tax</b>		<u>₩ (1,430,936,931,692)</u>	<u>₩ (425,120,845,694)</u>
<b>Attributable to:</b>			
Equity holders of the parent		(726,791,363,904)	(277,122,175,008)
Non-controlling interests		(704,145,567,788)	(147,998,670,686)
		<u>₩ (1,430,936,931,692)</u>	<u>₩ (425,120,845,694)</u>

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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated 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	Non-controlling interest	Total equity
<b>As at January 1, 2014</b>	₩ 530,791,280,000	₩ 1,521,655,341,205	₩ (13,188,236,134)	₩ 324,556,819,190	₩ 2,362,821,296,186	₩ 3,185,157,701,118	₩ 7,911,794,201,565
Profit (loss) for the year	-	-	-	-	(94,675,179,547)	9,199,832,367	(85,475,347,180)
Remeasurement of the net defined benefit liabilities, net of tax	-	-	-	-	(78,809,035,332)	(31,652,248,640)	(110,461,283,972)
Net change in unrealized fair value of available-for-sale financial assets	-	-	-	1,225,076,566	-	-	1,496,857,115
Effective portion of changes in fair value of cash flow hedges	-	-	-	22,759,131,454	-	(26,581,463,589)	(3,822,332,135)
Equity adjustments in equity method (debit)	-	-	-	(285,147,403)	-	282,520,472	(2,626,931)
Net loss on translation of foreign operations	-	-	-	(127,258,420,339)	-	(99,405,551,593)	(226,663,971,932)
Net loss on revaluation of land	-	-	-	(78,600,407)	-	(113,540,252)	(192,140,659)
<b>Total comprehensive income</b>	-	-	-	<b>(103,637,960,129)</b>	<b>(173,484,214,879)</b>	<b>(147,998,670,686)</b>	<b>(425,120,845,694)</b>
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
Dividends of the subsidiaries	-	-	-	-	-	(28,418,000,000)	(28,418,000,000)
Transactions of treasury shares by subsidiaries	-	(6,431,255,653)	(85,639,596,240)	-	-	10,360,243,563	(81,710,608,330)
Acquisition of investments in subsidiaries	-	-	(1,461,576,738)	-	-	(3,301,762,262)	(4,763,339,000)
Capital increase by issuing new shares of subsidiaries	-	(70,366,602)	(56,319,012)	-	-	126,685,614	-
Issuance of convertible bonds by subsidiaries	-	1,407,042,703	-	-	-	262,245,117	1,669,287,820
Others	-	1,228,983,986	(297,353,168)	-	-	1,393,708,586	2,325,339,404
<b>As at December 31, 2014</b>	₩ 596,808,980,000	₩ 1,828,284,636,555	₩ (101,795,674,821)	₩ 220,918,859,061	₩ 2,115,202,768,057	₩ 3,017,582,151,050	₩ 7,677,001,719,932

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**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated statements of changes in equity (cont'd)**  
**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	Non-controlling interest	Total equity
<b>As at January 1, 2015</b>	₩ 596,808,980,000	₩ 1,828,284,636,585	₩ (101,795,674,821)	₩ 220,918,859,061	₩ 2,115,202,769,057	₩ 3,017,582,151,050	₩ 7,677,001,719,932
Loss for the year	-	-	-	-	(1,038,543,220,644)	(712,356,108,865)	(1,750,899,329,509)
Remeasurement of the net defined benefit liabilities, net of tax	-	-	-	-	3,500,483,847	15,340,622,722	18,841,106,569
Net change in unrealized fair value of available-for-sale financial assets	-	-	-	(30,340,636,819)	-	27,236,010,270	-
Effective portion of changes in fair value of cash flow hedges	-	-	-	55,555,208,269	-	(43,491,432,005)	12,063,776,264
Equity adjustments in equity method (debit)	-	-	-	2,183,896,859	-	(842,977,511)	1,340,919,348
Net loss on translation of foreign operations	-	-	-	(16,612,368,911)	-	(52,314,219,502)	(68,926,588,413)
Net gain on revaluation of land	-	-	-	280,306,548,443	17,158,725,052	62,282,537,103	359,747,810,598
<b>Total comprehensive income</b>	-	-	-	<b>291,092,647,841</b>	<b>(1,017,884,011,745)</b>	<b>(704,145,567,788)</b>	<b>(1,430,936,931,692)</b>
Dividends	-	-	-	-	(84,230,535,915)	-	(84,230,535,915)
Stock option	-	2,100,996,093	(1,116,157,779)	-	-	-	984,838,314
Changes in consolidation scope	-	-	-	-	-	1,080,996,843	1,080,996,843
Dividends of the subsidiaries	-	-	-	-	-	(85,494,554,491)	(85,494,554,491)
Transactions of treasury shares by subsidiaries	-	23,860,561,032	-	-	-	(33,858,304,362)	(9,997,743,330)
Capital increase by issuing new shares of subsidiaries	-	-	(231,156,754)	-	-	916,908,916,650	916,677,759,896
Convertible bonds by subsidiaries	-	(65,478,549,444)	-	-	-	105,988,016,531	40,509,467,087
Stock option of subsidiaries	-	1,928,367,105	(1,731,065,518)	-	-	315,353,901	512,655,488
Business transfer between subsidiaries	-	-	(283,106,106)	-	-	283,106,106	-
Changes in non-controlling interests	-	(226,778,338,845)	-	-	-	226,778,338,845	-
<b>As at December 31, 2015</b>	₩ 596,808,980,000	₩ 1,563,917,672,526	₩ (105,157,160,978)	₩ 512,011,506,902	₩ 1,013,088,220,397	₩ 3,445,438,453,285	₩ 7,026,107,672,132

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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated statements of cash flows**  
**for the years ended December 31, 2015 and 2014**

(Korean won in units)

	Notes	2015	2014
<b>Operating activities:</b>			
Cash generated from operating activities:	36		
Loss for the year		₩ (1,750,899,329,509)	₩ (85,475,347,180)
Adjustments		2,796,807,824,518	1,830,501,922,424
Working capital adjustments		(479,967,906,093)	(345,912,328,229)
Interest received		41,862,736,122	55,528,847,058
Interest paid		(576,553,756,935)	(618,203,026,965)
Dividends received		1,716,215,002	1,558,270,393
Income taxes paid		(107,337,929,391)	(234,189,415,047)
<b>Net cash flows</b>			
<b>provided by (used in) operating activities</b>		<b>(74,372,146,286)</b>	<b>603,808,922,454</b>
<b>Investing activities:</b>			
Proceeds from disposal of short-term financial instruments		202,203,565,224	288,798,834,598
Proceeds from disposal of short-term investments in securities		80,499,361,714	73,071,978,911
Collection of short-term loans		103,894,172,141	181,531,790,623
Proceeds from disposal of long-term financial instruments		11,158,450,670	4,431,747,297
Proceeds from disposal of long-term investment in securities		15,745,912,830	6,911,704,798
Collection of long-term loans		132,493,369,838	78,556,516,994
Proceeds from disposal of investments in associates and joint ventures		5,999,506,443	6,474,033,289
Proceeds from disposal of investments in subsidiaries		126,667,468,493	-
Proceeds from disposal of property, plant and equipment		30,891,342,577	14,126,457,253
Proceeds from disposal of intangible assets		2,863,652,101	3,555,188,974
Proceeds from disposal of investment property		1,577,382,829	1,486,728,579
Proceeds from disposal of non-current assets classified as held-for-sale		-	9,665,880,000

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**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Consolidated statements of cash flows**  
**for the years ended December 31, 2015 and 2014 (cont'd)**

(Korean won in units)

	<u>Notes</u>	<u>2015</u>	<u>2014</u>	
Proceeds from transfer business		128,317,226,465	-	
Acquisition of short-term financial instruments		(79,222,803,135)	(95,207,452,344)	
Acquisition of short-term investments in securities		(3,955,604,933)	(65,228,155,478)	
Increase in short-term loans		(155,702,429,216)	(104,582,725,328)	
Acquisition of long-term financial instruments		(56,094,727,889)	(1,117,551,401)	
Acquisition of long-term investment in securities		(12,416,609,062)	(20,269,579,917)	
Increase in long-term loans		(212,259,140,998)	(293,311,264,050)	
Acquisition of investments in associates and joint ventures		(1,108,000,000)	(268,400,000)	
Acquisition of investments in subsidiaries	39	(54,940,467,860)	-	
Acquisition of property, plant and equipment		(388,747,759,099)	(372,668,244,664)	
Acquisition of intangible assets		(253,851,630,523)	(260,695,999,999)	
Acquisition of investment property		(3,727,430,450)	-	
<b>Net cash flow used in investing activities</b>		<b>(379,715,191,840)</b>	<b>(544,738,511,865)</b>	
<b>Financing activities:</b>				
Net increase in short-term borrowings	₩	1,172,995,994,644	₩	580,935,632,821
Proceeds from short-term bonds		-	30,000,000,000	
Proceeds from asset-backed loans		1,294,518,541,269	1,028,000,000,000	
Issuance of debentures		710,193,878,690	649,688,561,247	
Proceeds from long-term borrowings		742,556,421,012	2,842,390,469,873	
Proceeds from disposal of treasury shares by subsidiaries		-	3,963,729,410	
Capital increase by issuing new shares		-	372,678,874,818	
Capital increase by issuing new shares of subsidiaries	23	916,677,759,896	-	
Changes in consolidation scope		1,080,996,843	-	
Repayment of current portion of long-term debt		(1,255,456,228,592)	(2,030,330,435,447)	
Repayment of assets backed loans		(1,203,450,000,000)	(829,350,000,000)	
Repayment of debentures		(45,694,643,604)	(137,771,678,621)	
Repayment of long-term borrowings		(1,094,394,528,323)	(1,990,867,314,625)	
Repayment of financial lease liabilities		(660,278,141)	-	
Dividends paid	22	(84,230,535,915)	(74,134,313,250)	
Dividends paid by subsidiaries		(85,494,554,491)	(28,418,000,000)	
Acquisition of additional shares in subsidiaries		-	(4,763,339,000)	
Acquisition of treasury shares by subsidiaries		(9,997,743,330)	(85,674,337,740)	
<b>Net cash flows provided by financing activities</b>		<b>1,058,645,079,958</b>	<b>326,347,849,486</b>	
Net foreign exchange difference		(9,110,207,916)	(30,619,708,487)	
Net increase in cash and cash equivalents		595,447,533,916	354,798,551,588	
Cash and cash equivalents as at January 1		1,297,560,213,962	942,761,662,374	
<b>Cash and cash equivalents as at December 31</b>	<b>₩</b>	<b>1,893,007,747,878</b>	<b>₩</b>	<b>1,297,560,213,962</b>

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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2015 and 2014**

**1. Corporate information**

**1-1. General**

Doosan Heavy Industries & Construction Co., Ltd. (the "Company") was incorporated on September 20, 1962, with its headquarters in Changwon, Korea. Since its incorporation, the Company has grown to become one of the leading global manufacturers of advanced power generation equipment. The Company engages in manufacturing of a range of thermal and nuclear power generation equipment including boilers, turbines and generators. It also engages in engineering, procurement and construction of thermal power plants. The Company also supplies seawater desalination and water treatment solutions to its clients. In addition to the domestic production facilities in Changwon, the Company operates a global network of production facilities in the United Kingdom, the Czech Republic, India, Romania and Vietnam.

The Company has been listed on the Korea Exchange since October 25, 2000 and its major stockholder as at December 31, 2015 is Doosan Corp. holding an equity ownership of 36.82%.

**1-2. Subsidiaries**

The Company's subsidiaries as at December 31, 2015 are as follows:

Subsidiaries	Principal business activity	Country of domicile	Ownership interest held by the parent (%) (*1)		Reporting date (*2)
			2015	2014	
Doosan Asset Management Company Co., Ltd.	Property development	Korea	100	100	Dec. 31
Doosan Heavy Industries Vietnam Co., Ltd.	Manufacturing of machinery & equipment	Vietnam	100	100	"
HF Controls Corp.	Manufacturing	USA	100	100	"
Doosan HF Controls Asia Co., Ltd.	Manufacturing	Korea	100	-	"
PT. Doosan Heavy Industries Indonesia	Manufacturing	Indonesia	55	55	"
Doosan Heavy Industries Japan Corp.	Sales	Japan	100	100	"
S.C Doosan IMGB S.A.	Manufacturing	Romania	99.85	99.85	"
Doosan Enpure Ltd.	Engineering & Services	UK	100	100	"
Doosan Construction Site Solutions Vietnam Co., Ltd.	Equipment lease	Vietnam	100	100	"
Doosan Power Systems India Private Ltd.	Engineering & Services	India	100	100	Mar. 31
Doosan Heavy Industries Muscat LLC	Manufacturing	Oman	70	-	Dec. 31
Doosan Power Systems Arabia	Manufacturing	Saudi Arabia	51	-	"
Doosan Heavy Industries America Holdings Inc.	Holdings Company	USA	100	100	"
Doosan Hydro Technology Inc.	Manufacturing	USA	100	100	"
Doosan Engineering & Services LLC	Engineering & Services	USA	100	100	"
Doosan Heavy Industries America Corp.	Sales	USA	100	100	"
Doosan ATS America, LLC	Engineering & Services	USA	100	100	"
Doosan Skoda Power s.r.o	Manufacturing	Czech	100	100	"
Skoda Power Private Ltd.	Engineering	India	100	100	Mar. 31
Doosan Power Systems Pension Trustee Company Ltd.	Professional services	UK	100	100	Dec. 31
Doosan Power Systems Overseas Investments Ltd.	Holdings Company	UK	100	100	"
Doosan Babcock Ltd.	Engineering & Services	UK	100	100	"
Doosan Power Systems Holdings Ltd.	Holdings Company	UK	100	100	"

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2015 and 2014**

**1. Corporate information (cont'd)**

**1-2. Subsidiaries (cont'd)**

Subsidiaries	Principal business activity	Country of domicile	Ownership interest held by the parent (%) (*1)		Reporting date (*2)
			2015	2014	
Doosan Power Systems Europe Limited GmbH	Engineering & Services	Germany	100	100	Dec. 31
Doosan Power Systems Americas LLC	Engineering & Services, Sales	USA	100	100	"
Doosan Lentjes UK Limited	Professional services	UK	100	100	"
Doosan Lentjes GmbH	Engineering & Services	Germany	99.04	99.04	"
Doosan Power Systems S.A ("DPS S.A.")	Holdings Company	Luxem-bourg	100	100	"
Doosan Babcock Energy Technologies (Shanghai) Ltd.	Engineering & Services	China	100	100	"
Doosan Babcock Energy Services (Overseas) Ltd.	Engineering & Services	UK	100	100	"
Doosan Babcock Energy Polska Sp z.o.o	Engineering & Services	Poland	98.91	98.91	"
Doosan Babcock Energy Germany GmbH	Engineering & Services	Germany	100	100	"
Doosan Lentjes Czech s.r.o	Professional services	Czech	100	100	"
AE&E Lentjes Belgie N.V.	Dormant	Belgium	100	100	"
Doosan Power System (Scotland) Ltd. Partnership	Real estate	UK	100	100	"
Doosan Babcock General Maintenance Services LLC (*3)	Professional services	UAE	49	49	"
Doosan Babcock WLL(*3)	Professional services	Qatar	49	49	"
KDPP 1st Co.,Ltd. (*4)	Asset Securitization	Korea	-	-	"
Happy Tomorrow 20th Co., Ltd.(*4)	Asset Securitization	Korea	-	-	"
Doosan Infracore Co., Ltd. ("DI") and subsidiaries (*5)	Manufacturing of machinery & equipment	Korea, etc	36.4	36.4	"
Doosan Engineering & Construction Co., Ltd. ("DEC") and subsidiaries	Construction and manufacturing	Korea, etc	80.01	84.29	"
Doosan Engine Co., Ltd. ("DE") and subsidiaries (*5)	Manufacturing of machinery & equipment	Korea, etc	42.66	42.66	"

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2015 and 2014**

**1. Corporate information (cont'd)**

**1-2. Subsidiaries (cont'd)**

- (\*1) The ownership percentage represents the equity interest held by the Company (the parent) in each respective subsidiary, except Doosan Heavy Industries Vietnam Co., Ltd. of which 24.76% of equity interest are owned by Doosan Engineering & Construction Co., Ltd. (DEC). Overall, the Group has an effective ownership interest of 95.05% of the Doosan Heavy Industries Vietnam Co., Ltd.
- (\*2) Where the reporting date of subsidiaries are not consistent with that of the Company based on local laws, adjustments have been made to conform with the Company's reporting date for preparation of consolidated financial statements.
- (\*3) Although the Company's ownership interest in the investee is less than a majority, the Company assessed that it exercises control over the investee based on the voting rights in the equity's board of directors.
- (\*4) The Company assessed that it exercises control over the special purpose entity as the entity's activities are substantively governed by the Company.
- (\*5) Although the Company's ownership interest in the investee is less than a majority, the Company assessed that it exercises control over the investee based on its holdings relative to the size and dispersion of ownership interests held by other equity holders and the voting patterns in previous shareholders' meetings.

**1-3. Main subsidiary's financial information**

Summarized financial information of main subsidiaries as at and for the year ended December 31, 2015 is as follows (Korean won in millions):

Subsidiary	Assets	Liabilities	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Doosan Heavy Industries Vietnam Co., Ltd.	₩ 423,325	₩ 355,464	₩ 229,133	₩ (12,268)	₩ (12,268)
HF Controls Corp.	22,597	8,550	15,505	561	561
Doosan Heavy Industries Japan Corp.	30,932	28,221	2,985	220	220
S.C Doosan IMGB S.A.	154,640	119,357	86,543	(2,968)	(2,968)
Doosan Construction Site Solutions Vietnam Co., Ltd.	13,411	1,257	4,914	40	40
Doosan Power Systems India Private Ltd.	443,768	343,835	314,135	(32,650)	(30,350)
Doosan Heavy Industries America Holdings Inc.	190,987	34,013	-	2,774	2,774
Doosan Hydro Technology Inc.	26,013	49,369	25,841	(1,143)	(1,143)
Doosan Heavy Industries America Corp.	22,383	14,293	3,711	(48,357)	(48,357)
Doosan Skoda Power s.r.o	613,181	204,361	346,015	59,345	67,018
Doosan Power Systems Overseas Investments Ltd.	89,062	101,333	-	(688)	(688)



**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2015 and 2014**

**1. Corporate information (cont'd)**

**1-3. Main subsidiary's financial information (cont'd)**

Subsidiary	Assets	Liabilities	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Doosan Babcock Ltd.	₩ 1,771,316	₩ 932,823	₩ 791,372	₩ (10,888)	₩ 4,007
Doosan Power Systems Holdings Ltd.	154,308	-	-	8,931	8,931
Doosan Power Systems Europe Limited GmbH	174,089	114,344	-	(1,518)	(1,518)
Doosan Lentjes GmbH	87,989	58,511	37,631	(13,475)	(14,522)
DPS S.A.	1,449,761	1,015,383	752	(42,785)	(42,785)
Doosan Babcock Energy Polska Sp z.o.o.	25,523	13,877	46,134	1,913	2,026
Doosan Power Systems (Scotland) Ltd. Partnership	35,272	1,699	2,227	(1,295)	3,721
DI and its subsidiaries	11,383,173	8,280,217	7,212,985	(859,505)	(842,846)
DEC and its subsidiaries	4,225,712	2,811,405	1,805,357	(520,746)	(523,698)
DE and its subsidiaries	1,406,042	831,369	693,645	(125,442)	(126,102)

**1-4. Significant non-controlling interests**

Financial information of subsidiaries attributable to significant non-controlling interests is as follows (Korean won in millions):

Subsidiary	Net loss attributable to non-controlling interests	Cumulative non-controlling interests	Dividends allocated to non-controlling interests
Doosan Infracore Co., Ltd. and subsidiaries	₩ (525,898)	₩ 2,260,213	₩ (32,710)
Doosan Engineering & Construction Co., Ltd. and subsidiaries	(109,980)	624,806	(52,785)
Doosan Engine Co., Ltd. and subsidiaries.	(76,062)	251,187	-

**1-5. Cash flow information for subsidiaries with significant non-controlling interests**

Cash flow information for subsidiaries with significant non-controlling interests is as follows (Korean won in millions):

	2015		
	DI and subsidiaries	DEC and subsidiaries	DE and subsidiaries
I . Net cash flows provided by (used in) operating activities	₩ 236,685	₩ 215,008	₩ (44,145)
II . Net cash flow provided by (used in) investing activities	(96,938)	97,707	14,886
III . Net cash flows provided (used in) by financing activities	82,007	(372,211)	29,606
IV . Net foreign exchange difference	(24,704)	202	136
V . Net increase (decrease) in cash and cash equivalents ( I + II + III + IV )	197,050	(59,294)	483
VI . Cash and cash equivalents as at January 1	362,953	167,498	44,999
VII . Cash and cash equivalents as at December 31	₩ 560,003	₩ 108,204	₩ 45,482

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2015 and 2014**

**1. Corporate information (cont'd)**

**1-6. Changes in the scope of consolidation**

Changes in the scope of consolidation for the year ended December 31, 2015 are as follows:

Subsidiary	Description	Reason
Doosan Infracore Bobcat Korea Co., Ltd.	Incorporation of new connections	Establishment of new corporation
Doosan Infracore Construction Equipment India Priavte Ltd.	Incorporation of new connections	Establishment of new corporation
Doosan Bobcat Chile Compact SpA	Incorporation of new connections	Establishment of new corporation
Doosan Engine PNG Co., Ltd.	Incorporation of new connections	Establishment of new corporation
Doosan (China) Financial Leasing Corp.	Incorporation of new connections	Acquisition control
Doosan HF Controls Asia Co., Ltd.	Incorporation of new connections	Establishment of new corporation
Doosan Heavy Industries Muscat LLC	Incorporation of new connections	Establishment of new corporation
Doosan Power Systems Arabia	Incorporation of new connections	Establishment of new corporation
KDPP 1st Co., Ltd.	Incorporation of new connections	Establishment of new corporation
Happy Tomorrow 20th Co., Ltd.	Incorporation of new connections	Establishment of new corporation
Doosan Cuvex 1st Securitization Specialty LLC	Incorporation of new connections	(*1)
SD 1st Co., Ltd.	Incorporation of new connections	(*1)
PINETREE CITY 1st Co.,Ltd.	Incorporation of new connections	(*1)
DS Changwon 1st LLC	Incorporation of new connections	(*1)
SD 5th Co., Ltd.	Incorporation of new connections	(*1)
DS Public 1st Co., Ltd.	Incorporation of new connections	(*1)
DS Public 2nd Co., Ltd.	Incorporation of new connections	(*1)
DS-Bliss 1st Co., Ltd.	Incorporation of new connections	(*1)
The DSWAY 1st Co., Ltd.	Incorporation of new connections	(*1)
Doosan E&C 2nd Co., Ltd.	Incorporation of new connections	(*1)
Montabert	Excluded from consolidation	Disposal stock
Doosan Power Systems Czech Investment a.s.	Excluded from consolidation	Liquidation

(\*1) Special purpose entities ("SPE") classified as unconsolidated structured entities in 2014 were included in consolidation in 2015. The Group assessed that the financial impact of their reclassification to consolidation was not material to the consolidated financial statements.

During the year, DEC, a subsidiary, entered into a treasury share trust contract related to acquisition of treasury shares amounting to ₩10,000 million. Accordingly, the treasury share trust was included in consolidation.

## **2. Summary of significant accounting policies**

### **2-1. Basis of preparation**

The Group prepares statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Corporate External Audit Law*. The accompanying consolidated financial statements 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 in units except for the accompanying notes to the consolidated financial statements.

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

### **2-2. Basis of consolidation**

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as at December 31, 2015. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if and only if the Group has:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee, and
- The ability to use its power over the investee to affect its returns

When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of profit or loss and the statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) or loss are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If the Group loses control over a subsidiary, it:

- Derecognizes the assets (including goodwill) and liabilities of the subsidiary
- Derecognizes the carrying amount of any non-controlling interests
- Derecognizes the cumulative translation differences recorded in equity
- Recognizes the fair value of the consideration received
- Recognizes the fair value of any investment retained
- Recognizes any surplus or deficit in profit or loss
- Reclassifies the parent's share of components previously recognized in OCI to profit or loss or retained earnings, as appropriate, as would be required if the Group had directly disposed of the related assets or liabilities

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

### 2-3. New and amended standards

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2014, except for the adoption of new standards, interpretations and amendments as at January 1, 2015, noted below.

#### ***Amendments to KIFRS 1019 Defined Benefit Plans: Employee Contributions***

*KIFRS 1019* requires an entity to consider contributions from employees or third parties when accounting for defined benefit plans. Where the contributions are linked to service, they should be attributed to periods of service as a negative benefit. These amendments clarify that, if the amount of the contributions is independent of the number of years of service, an entity is permitted to recognize such contributions as a reduction in the service cost in the period in which the service is rendered, instead of allocating the contributions to the periods of service.

#### ***KIFRS 1102 Share-based Payment***

This improvement is applied prospectively and clarifies various issues relating to the definitions of performance and service conditions which are vesting conditions.

- 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 Group;
- 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.

#### ***KIFRS 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 Group has not applied the aggregation criteria in *KIFRS 1108.12*. The Group has presented the reconciliation of segment assets to total assets in previous periods as the reconciliation is reported to the chief operating decision maker for the purpose of decision making.

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

### 2-3. New and amended standards (cont'd)

#### ***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 Group 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 Group's financial statements are disclosed below. The Group intends to adopt these standards, if applicable, when they become effective.

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

**2-4. Investment in associates and joint ventures**

An associate is an entity over which the Group has significant influence, and which is neither a subsidiary nor an investment in a joint venture and the Group generally holds, directly or indirectly through subsidiaries, between 20% and 50% of the voting power of the entity. A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The Group's investments in its associate and joint venture accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is neither amortized nor individually tested for impairment.

After acquisition, the Group's share of the profit or loss and other comprehensive income or loss of the associates and jointly controlled entities are recognized as profit or loss and other comprehensive income or loss and the Group's share of the changes in retained earnings of the associates and joint ventures are recognized as retained earnings. When the Group's share of losses of an associates and joint ventures exceeds the Group's interest in those entities (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associates and joint ventures.

Unrealized gains from transactions between the Group and its associates and joint ventures are eliminated up to the interests in those entities. Unrealized losses are also eliminated unless evidence of impairment in assets transferred is provided.

When necessary, the Group may revise associates' and joint ventures' financial statements, to apply consistent accounting policies as the Group, prior to applying the equity method of accounting for its investments in the associates and joint ventures.

For overseas investees whose financial statements are prepared in foreign currencies, the equity method of accounting is applied after assets and liabilities are translated in accordance with the accounting treatments for the translation of the financial statements of overseas' subsidiaries for consolidated financial statements. The Group's proportionate share of the difference between assets net of liabilities and equity after translating into Korean Won is accounted for as "increase (decrease) in equity adjustments in equity method investments" included in accumulated other comprehensive income (loss).

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

### 2-5. Foreign currency translation

#### Functional currency and presentation currency

The Group'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 consolidated financial statements of the Group are Korean won.

#### Transactions and balances

Transactions in currencies other than the entity'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.

#### Group companies

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations having functional currencies different from the Group's are translated in presentation currency of the Group using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in other comprehensive income or loss and accumulated in equity (attributed to non-controlling interests as appropriate).

Exchange differences from the net investment in the foreign operation, and borrowings and other foreign currency instruments designated as hedging instrument for the net investment in the foreign operation are recognized in other comprehensive income or loss. On the disposal of a foreign operation resulting in loss of control, all of the accumulated exchange differences in respect of that operation are reclassified to profit or loss. Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

### 2-6. Cash and cash equivalents

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 consolidated statements of financial position.

### 2-7. 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 include financial assets classified as held for trading and financial assets designated as 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. Summary of significant accounting policies (cont'd)**

### **2-7. Financial assets (cont'd)**

#### *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 period, 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 period.

#### *4) Held-to-maturity financial assets*

Held-to-maturity financial assets are non-derivative financial instruments with fixed or determinable payments and fixed maturity for which the Group 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 period, are classified as non-current assets. Otherwise they are classified as current assets.

### **Subsequent measurement**

Financial assets are generally recognized on the trade date, which is the date the Group 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 consolidated 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 investments 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 consolidated statement of profit or loss. Dividends on financial assets at fair value through profit or loss are recognized in the finance income when the Group'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 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 consolidated statement of profit or loss. Dividends on AFS equity instruments are recognized in the finance income when the Group's right to receive the dividends is established.

### **Impairment of financial assets**

#### *1) Financial assets carried at amortized cost*

The Group assesses, at the end of each reporting period, 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.



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

### **2-7. Financial assets (cont'd)**

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 (EIR) 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 Group measures impairment loss based on fair value of financial assets from observable market data.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed and recognized in profit or loss.

#### 2) Available-for-sale financial investments

The Group assesses, at the end of each reporting period, whether there is any objective evidence that a financial asset or group of financial assets is impaired. 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 period, 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.

### **Derecognition**

The Group 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 consolidated statement of financial position when the Group 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.

### **2-8. 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 an individual basis based on past bad debt experience.

### **2-9. 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. Summary of significant accounting policies (cont'd)

### 2-10. 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 Group 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.

### 2-11. Property, plant and equipment

Property, plant and equipment is 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.

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 Group 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	10~43 years
Structures	5~40 years
Machinery	2~20 years
Heavy equipment	10 years
Vehicles	3~10 years
Others	2~14 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 Group reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If 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).

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

### 2-11. Property, plant and equipment (cont'd)

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.

### 2-12. 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 intangible assets are as follows:

	Useful lives
Industrial property rights	5~10 years
Development costs	4~12 years
Others	2~20 years

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

Goodwill acquired in a business combination is measured as the excess of the sum of: a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree, and c) the fair value of the acquirer's previously held equity interest in the acquiree (if any); over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed and is classified as intangible assets. Goodwill is tested for impairment annually and carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any. Impairment loss recognized for goodwill is not reversed. For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units (or groups of cash-generating units) that is expected to benefit from the synergies of the combination.

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 Group 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 period and for the assets which have been assessed as having indefinite useful life, that assessment is revisited each period, with the effect of any changes in estimate being accounted for as a change in accounting estimate.

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

### **2-13. 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 20 and 48 years.

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

### **2-14 Borrowing costs**

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

### **2-15. 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 Group 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 group 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 period.

### **2-16. Borrowings**

Borrowings are measured initially at fair value, net of transaction costs and subsequently at amortized cost using the EIR, 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 Group has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting period. Otherwise borrowings are classified as current liabilities.

### **2-17. Compound financial instrument**

Compound financial instruments issued by the Group are classified as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement. The conversion right of convertible bonds and stock warranties embedded in compound financial instrument issued by the Group which can, at the option of the holder, be converted into a fixed number of equity instruments in the Group, 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 at amortized cost by applying the EIR until it is extinguished. The equity component is measured by deducting the fair value of the liability component from the fair value of the compound financial instrument as a whole on initial recognition. Any tax effect is also reflected, and such instrument is not subsequently remeasured.

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

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

### **2-18. Financial guarantee contracts**

The Group has financial guarantee contract liabilities, which are obligations to pay specific amounts for indemnifying creditors' loss on insolvency of specific debtors according to initial or 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 less the cumulative amortizations recognized in accordance with the *KIFRS 1018 Revenue*.

### **2-19. Employee benefits liability**

The Group operates various types of benefit plans, and generally makes contributions calculated based on periodic actuarial calculations to separately administered funds such as qualifying insurance companies or trust funds.

A defined contribution plan is a post-employment benefit plan, under which the Group pays fixed contribution to a separately administered fund. The Group does not assume any legal or constructive obligation to pay the additional contribution even if the fund does not hold sufficient assets to pay benefits, relating to employee's service in the current and prior periods, in full. The contribution is recognized as pension benefit at the date of payment. If the contribution already paid exceeds the contribution due for services rendered prior to the end of the reporting period, the Group recognizes such excess as an asset (prepaid expense) to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

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 consolidated statements of financial position represents the present value of the defined benefit obligation, less fair value of plan assets and adjustment 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 Group'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 period the plan amendment or curtailment occurs.

### **2-20. Provisions**

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. 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 period, 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 period.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. In this case, any income arising from the third party reimbursement is netted off against the related expense to be recognized in the consolidated statements of profit or loss from the recognition of provisions.

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

### **2-21. 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.

### **2-22. 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 remeasured to their fair value at the end of each reporting period. 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 Group 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 Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group 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 periods 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) 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. Summary of significant accounting policies (cont'd)**

### **2-23. Dividend**

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

### **2-24. Issued capital**

Common stocks are classified as equity, and the incremental costs directly arising from capital transactions, net of tax are deducted from equity. Preferred stocks are classified as equity only if the preferred stocks are not redeemable or redeemable solely upon the Group's decision, or the distribution of dividends is solely upon the Group's decision. Once a general meeting of shareholders meeting approves dividends, the Group recognizes the dividend liability accordingly.

Own equity instruments that are reacquired (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 Group's own equity instruments.

### **2-25. Share-based payments**

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

### **2-26. 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 Group. Revenue is reduced for value added tax, estimated customer returns, rebates and trade discounts and is presented after eliminating intercompany transactions. The Group 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 Group and when transaction meets the revenue recognition criteria specified by activity. When measuring revenue, the Group 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 Group 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 Group 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 period. 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 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 Group 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. Summary of significant accounting policies (cont'd)**

**2-27. 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 Group offsets the income from government grants with such expenses and recognizes the net amount in profit or loss.

**2-28. 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 periods are included in income tax expense for the current period when recognized. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable income. Deferred tax 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 period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, joint ventures and associates except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable income against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

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



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

**2-29. Non-current assets held for sale**

Non-current assets and disposal groups 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 groups) 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.

If the fair value less costs to sell of the non-current assets held-for-sale (and disposal groups) 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.

**2-30. Operating segments**

Operating segments are reported on the same basis as the financial information that is reported to the management of the Group. The management of the Group is responsible for the allocation of resources and assessment of performance for the operating segments.

**2-31. Greenhouse gas emissions**

The Group receives free emission rights as a result of emission trading schemes. The rights are received on an annual basis and, in return, the Group is required to remit rights equal to its actual emissions. The Group 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.

**2-32. Standards issued but not yet effective**

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below.

***KIFRS 1109 Financial Instruments***

The KASB issued the final version of *KIFRS 1109 Financial Instruments* that replaces *KIFRS 1039 Financial Instruments: Recognition and Measurement* and all previous versions. *KIFRS 1109* brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. *KIFRS 1109* is effective for annual periods beginning on or after January 1, 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

***KIFRS 1115 Revenue from Contracts with Customers***

Under *KIFRS 1115*, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. Early adoption is permitted.

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

### 2-32. Standards issued but not yet effective (cont'd)

#### **Amendments to KIFRS 1111 Joint Arrangements: Accounting for Acquisitions of Interests**

The amendments to KIFRS 1111 require that a joint operator accounting for the acquisition of an interest in a joint operation, in which the activity of the joint operation constitutes a business must apply the relevant KIFRS 1103 principles for business combinations accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation while joint control is retained. In addition, a scope exclusion has been added to KIFRS 1111 to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party. The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are prospectively effective for annual periods beginning on or after January 1, 2016, with early adoption permitted.

#### **Amendments to KIFRS 1016 and KIFRS 1038: Clarification of Acceptable Methods of Depreciation and Amortization**

The amendments clarify the principle in KIFRS 1016 and KIFRS 1038 that revenue reflects a pattern of economic benefits that are generated from operating a business (of which the asset is part) rather than the economic benefits that are consumed through use of the asset. As a result, a revenue-based method cannot be used to depreciate property, plant and equipment and may only be used in very limited circumstances to amortize intangible assets. The amendments are effective prospectively for annual periods beginning on or after January 1, 2016, with early adoption permitted.

#### **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.

The Group examines the effect of the standards and interpretations to financial statement, The Group intends to adopt these standards, if applicable, when they become effective.

### 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 period, that have a significant risk of causing a material adjustment to the carrying amounts of the Group's 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 period, and in construction plans may have a significant effect on the amount of revenue recognized.

#### ***Impairment of goodwill***

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Recoverable amount of cash generating unit (CGU) is calculated based on the value in use, this calculation requires the use of accounting estimates.

#### ***Employee benefit liability***

The Group 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.

#### ***Provisions***

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that 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 periods.

#### ***Deferred tax***

Recognition and measurement of deferred tax assets and liabilities require judgement of the Group's management. Especially, the recognition of deferred tax asset and the scope of recognition are influenced by assumptions about future circumstances and judgement of management.

#### ***Impairment of non-financial assets***

Impairment exists when the carrying value of an asset or 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 Group 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 Group is exposed to various financial risks such as market risk, credit risk and liquidity risk relating to its operations. The objective of the Group'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 Group's treasury department in accordance with risk management policies. In addition, the Group monitors financial risks regularly to minimize the effect from such relevant risks.

##### **4-1. Market risk**

###### **(1) Foreign currency risk**

The Group's exposure to the risk of changes in foreign currency exchange rates relates primarily to the Group's operating activities and net investments in foreign subsidiaries. The Group'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 Group's policy on foreign currencies, and currency trading for speculative purposes is prohibited.

The Group manages foreign currency risk by matching the inflow and the outflow of foreign currencies (natural hedge) and by using currency derivatives, such as currency forwards, for the remaining exposure.

The Group's book value of financial assets and liabilities denominated in foreign currencies as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	USD	EUR	JPY	GBP	Others (*1)	Total
I. Financial assets	₩ 1,781,696	₩ 235,622	₩ 3,708	₩ 43,382	₩ 246,533	₩ 2,310,941
II. Financial liabilities	3,389,590	585,539	85,566	46,503	127,272	4,234,470
Net (I-II)	₩ (1,607,894)	₩ (349,917)	₩ (81,858)	₩ (3,121)	₩ 119,261	₩ (1,923,529)
	2014					
	USD	EUR	JPY	GBP	Others (*1)	Total
I. Financial assets	₩ 1,958,448	₩ 314,100	₩ 2,846	₩ 61,882	₩ 182,737	₩ 2,520,013
II. Financial liabilities	3,135,018	806,002	128,050	42,678	61,847	4,173,595
Net (I-II)	₩ (1,176,570)	₩ (491,902)	₩ (125,204)	₩ 19,204	₩ 120,890	₩ (1,653,582)

(\*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 a 10% fluctuation in foreign currency exchange rates, all other variables held constant, on the Group'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	₩ (192,353)	₩ 192,353	₩ (165,358)	₩ 165,358

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

**4. Financial risk management (cont'd)**

**4-1. Market risk (cont'd)**

(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 the interest rate risk management is to minimize the financial costs and uncertainty associated with interest rate changes.

The Group 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	₩	576,278	₩	308,665
Financial liabilities		5,469,319		4,389,496
Net	₩	(4,893,041)	₩	(4,080,831)

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	100 bp increase	100 bp decrease	100 bp increase	100 bp decrease
Profit (loss) before tax	₩	(48,930)	₩	48,930	₩	(40,808)	₩	40,808

(3) Other market price risk

The Group 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 Group assesses market price risk on a regular basis. Significant investments within a portfolio are individually managed and all decisions related to the purchase and disposal of such investments are approved by the Board of Directors.

**4-2. Credit risk**

The Group 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 financial instruments and financial guarantee contracts.

The Group 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. Such assessment is used as a basis for determining a customer's credit limit. Furthermore, collaterals and credit guarantees are obtained as security, if necessary. In addition, the Group periodically reassesses the credit quality of customers by auditing credit limits and adjusts the amount covered by collaterals when deemed necessary. The Group also monitors whether the collection of financial assets have been impaired to take relevant actions.

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**4. Financial risk management (cont'd)**

**4-2. Credit risk (cont'd)**

The following table presents, the carrying amounts of the Group's financial instruments that are exposed to credit risk. The carrying amounts indicate maximum exposure of credit risk (Korean won in millions).

	Description	2015	2014
Loans and other receivables	Cash and cash equivalents	₩ 1,893,008	₩ 1,297,560
	Short and long- term financial instruments	553,225	676,194
	Trade receivables and other receivables	4,225,543	4,284,485
	Deposits	253,323	309,024
Held-to-maturity financial assets		8,350	36,310
Available-for-sale financial assets (excluding equity securities)		7	2,950
Derivative financial assets		88,405	65,254
		<u>₩ 7,021,861</u>	<u>₩ 6,671,777</u>

Excluding the above financial instruments, the maximum guarantee amounts based on the Group's payment guarantee contracts are described in Note 33.

The aging analysis of trade and other receivables (excluding guarantee deposits) as at December 31, 2015 and December 31, 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	₩ 1,292,419	₩ 309,832	₩ 155,501	₩ 175,189	₩ 2,416,303	₩ 4,349,244
Loans and other receivables	489,981	270,441	43,350	102,759	1,310,813	2,217,344
Accrued income	37,776	101,233	-	-	10,297	149,306
	<u>₩ 1,820,176</u>	<u>₩ 681,506</u>	<u>₩ 198,851</u>	<u>₩ 277,948</u>	<u>₩ 3,737,413</u>	<u>₩ 6,715,894</u>

  

	2014					Total
	Before maturity	0~3 months	3~6 months	6~12 months	More than 12 months	
Trade receivables	₩ 1,155,844	₩ 312,107	₩ 145,724	₩ 128,918	₩ 2,336,378	₩ 4,078,971
Loans and other receivables	179,734	388,007	77,621	63,129	1,289,690	1,998,181
Accrued income	7,399	457	577	1,653	107,188	117,274
	<u>₩ 1,342,977</u>	<u>₩ 700,571</u>	<u>₩ 223,922</u>	<u>₩ 193,700</u>	<u>₩ 3,733,256</u>	<u>₩ 6,194,426</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 group 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 Group's past experience of receivables collection. Available-for-sale financial assets, held-to-maturity financial assets, deposits in financial institutions and derivative financial instruments are individually assessed for impairment.

**4. Financial risk management (cont'd)**

**4-3. Liquidity risk**

The Group 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 Group 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 Group'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	₩	16,218,972	16,245,785	10,045,230	2,266,430	2,098,613	1,835,512
Interest		-	885,032	340,817	188,475	322,449	33,291
	₩	<u>16,218,972</u>	<u>17,130,817</u>	<u>10,386,047</u>	<u>2,454,905</u>	<u>2,421,062</u>	<u>1,868,803</u>
		2014					
		Book value	Total	Less than 1 year	2 years or less	5 years or less	More than 5 years
Principal	₩	15,657,720	15,701,611	8,743,750	2,745,686	2,458,749	1,753,426
Interest		-	1,132,908	413,774	257,103	353,054	108,977
	₩	<u>15,657,720</u>	<u>16,834,519</u>	<u>9,157,524</u>	<u>3,002,789</u>	<u>2,811,803</u>	<u>1,862,403</u>

The contractual amounts of financial liabilities in the above tables are not discounted and differ from their book values. Besides the above non-derivative liabilities, the maximum guarantee amounts based on financial guarantee contracts provided by the Group as at December 31, 2015 are described in Note 33.

**4. Financial risk management (cont'd)**

**4-4. Capital risk management**

The objective of the Group's capital risk management is to secure its ability to provide earnings to its shareholders and interested parties and sustain optimal capital structure to reduce the cost of capital. In order to sustain optimal capital structure, the Group uses a debt-to-equity ratio similar to other entities in the industry. Debt-to-equity ratio is calculated by dividing total liabilities by total equity 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 financial instruments from total borrowings.

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

	2015	2014
Total liability (A)	₩ 20,234,033	₩ 19,874,905
Total equity (B)	7,026,108	7,677,002
Debt-to-equity ratio (A/B)	287.98%	258.89%
Cash and Cash equivalent, short-term/long-term financial instruments (C)	2,446,233	1,973,754
Total borrowings (D)	12,605,543	11,700,149
Net borrowings (E=D-C)	10,159,310	9,726,395
Net borrowings-to-equity ratio (E/B)	144.59%	126.70%

**5. Restricted financial instruments**

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

	2015	2014	Restrictions
Cash and cash equivalents	₩ 12,271	₩ 29,083	Project finance guarantee, import deposit and others
Short-term financial instruments	357,627	438,981	Government R&D projects (*1), advanced receipts from contractors (*2), shared growth fund, establishment of a pledge right, collateral for long-term borrowings and others
Long-term financial instruments	2,082	56,770	Security deposits for maintenance of checking accounts, beneficiary certificates and others
Deposits	584	-	Reserves for repayments related to asset-backed loans
	<u>₩ 372,564</u>	<u>₩ 524,834</u>	

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

(\*2) The amounts may only be used for designated construction contracts.



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**6. Short and long-term investments in securities**

6-1. 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	Available-for-sale financial assets	₩ 441	₩ 3,385
	Held-to-maturity financial assets	-	28,000
		441	31,385
Long-term investments in securities	Available-for-sale financial assets	182,070	179,632
	Held-to-maturity financial assets	8,350	8,310
		190,420	187,942
		₩ 190,861	₩ 219,327

6-2. 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	Hana Financial Group Inc.	₩ 93	₩ 126
	Others	456	574
		549	700
Non-marketable equity securities	Incheon-Kimpo Expressway Co., Ltd.	28,480	28,480
	Hwaseong City Expressway Co., Ltd.	9,578	6,859
	Korea Housing Guarantee Co., Ltd.	-	11,709
	Alpha Dome City Co., Ltd.	16,201	15,498
	Kangnam Beltway Co., Ltd.	4,965	5,187
	Pohang Yeongil New Port Corporation	6,479	7,432
	Masan Sewage Pipe Co., Ltd.	725	848
	S-Y Highway Co., Ltd.	19,848	16,215
	Sudokwon Seobu Expressway Co., Ltd.	9,174	9,174
	Daegu South Circulation Road Corporation	4,502	3,965
	UITrans LRT Co., Ltd.	8,706	6,025
	Seoul-Munsan Expressway Co., Ltd.	1,166	906
	Busan New Port the 2nd Rear Road Co., Ltd.	4,532	4,532
	Kyunggi South Road Co., Ltd.	4,232	4,181
	Others	5,157	4,323
	123,745	125,334	
Other equity investments	Lanco Kondapalli Power Ltd.	12,050	12,050
	Machinery Financial Cooperative	6,363	5,855
	Construction Guarantee Cooperative	31,434	31,291

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

Description		2015 (*1)		2014	
	Korea Finance Corporation Neoplux 2010-7	₩	1,955	₩	3,735
	Emerald Technology Ventures		2,201		-
	Others		1,535		397
			<u>55,538</u>		<u>53,328</u>
Beneficiary certificate	Nicolas Correa S.A.		2,011		420
	Others		661		285
			<u>2,672</u>		<u>705</u>
Investment trust	Asset Backed Commercial Paper		-		2,943
	Regional development bonds and others		7		7
		₩	<u>182,511</u>	₩	<u>183,017</u>

(\*1) As at December 31, 2015, a portion of the Group's available-for-sale financial assets has been pledged as collateral for the Group's borrowings and developers' project financing (See Note 34).

6-3. 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	Reclassified to profit or loss	December 31
Marketable equity securities	₩ (3,586)	₩ (533)	₩ -	₩ (4,119)
Non-marketable equity securities	(1,543)	(65)	(31,782)	(33,390)
Other equity investments	4,705	112	-	4,817
Tax effect	221	68	1,859	2,148
	<u>₩ (203)</u>	<u>₩ (418)</u>	<u>₩ (29,923)</u>	<u>₩ (30,544)</u>
	2014			
	January 1	Valuation	Reclassified to profit or loss	December 31
Marketable equity securities	₩ (3,461)	₩ (111)	₩ (14)	₩ (3,586)
Non-marketable equity securities	(2,525)	982	-	(1,543)
Debit securities	49	-	(49)	-
Other equity investments	3,939	766	-	4,705
Tax effect	569	(356)	8	221
	<u>₩ (1,429)</u>	<u>₩ 1,281</u>	<u>₩ (55)</u>	<u>₩ (203)</u>

6-4. 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
Government and corporate bonds	₩ -	₩ 49	₩ -	₩ 9
Other debt securities	-	8,301	28,000	8,301
	<u>₩ -</u>	<u>₩ 8,350</u>	<u>₩ 28,000</u>	<u>₩ 8,310</u>

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**7. Trade and other receivables**

7-1. 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	₩ 4,332,263	₩ (1,819,469)	₩ 2,512,794
Other receivables	540,335	(150,469)	389,866
Accrued income	149,306	(30,239)	119,067
Short-term loans	303,467	(125,083)	178,384
	<u>5,325,371</u>	<u>(2,125,260)</u>	<u>3,200,111</u>
Non-current assets:			
Long-term trade receivables	5,945	(76)	5,869
Long-term other receivables	4,208	(3,875)	333
Long-term loans	1,366,683	(347,453)	1,019,230
	<u>1,376,836</u>	<u>(351,404)</u>	<u>1,025,432</u>
	<u>₩ 6,702,207</u>	<u>₩ (2,476,664)</u>	<u>₩ 4,225,543</u>
	2014		
	Gross amounts	Allowance for doubtful accounts	Book value
Current assets:			
Trade receivables	₩ 4,063,362	₩ (1,498,931)	₩ 2,564,431
Other receivables	453,968	(122,895)	331,073
Accrued income	117,274	(1,910)	115,364
Short-term loans	557,799	(16,205)	541,594
	<u>5,192,403</u>	<u>(1,639,941)</u>	<u>3,552,462</u>
Non-current assets:			
Long-term trade receivables	6,707	(80)	6,627
Long-term other receivables	5,965	-	5,965
Long-term loans	976,964	(257,533)	719,431
	<u>989,636</u>	<u>(257,613)</u>	<u>732,023</u>
	<u>₩ 6,182,039</u>	<u>₩ (1,897,554)</u>	<u>₩ 4,284,485</u>



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**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	₩ 549,210	₩ (51,390)	₩ 497,820
Merchandise	481,645	(30,975)	450,670
Semi-finished goods	38,482	-	38,482
Work-in-process	455,094	(26,391)	428,703
Raw materials	591,312	(59,503)	531,809
Supplies	23,959	(288)	23,671
Materials-in-transit	184,218	-	184,218
Unfinished houses	20	-	20
Site	41,099	-	41,099
	₩ 2,365,039	₩ (168,547)	₩ 2,196,492

  

	2014		
	Acquisition cost	Provision for loss on valuation	Carrying amounts
Finished goods	₩ 575,581	₩ (50,265)	₩ 525,316
Merchandise	422,997	(25,138)	397,859
Semi-finished goods	50,599	-	50,599
Work-in-process	440,291	(17,701)	422,590
Raw materials	601,715	(46,489)	555,226
Supplies	20,991	(347)	20,644
Materials-in-transit	356,805	-	356,805
Unfinished houses	2,871	-	2,871
	₩ 2,471,850	₩ (139,940)	₩ 2,331,910

Loss on valuation of inventories amounting to ₩28,607 million and ₩24,323 million were recognized in cost of sales for the years ended December 31, 2015 and 2014, respectively.

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**9. Derivative financial instruments**

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

					2015		Accumulated other comprehensive income (loss) (*1)	Firm commitment assets (liabilities) (*2)
	Buy		Sell		Derivative financial assets (liabilities)	Gain (loss) on valuation of derivative financial instruments		
Foreign currency forward	KRW	6,575,715	USD	5,879,087	₩ (309,899)	₩ (256,150)	₩ (33,337)	₩ 135,560
	KRW	229,362	EUR	177,544	(217)	1,130	1,507	(499)
	KRW	257,857	JPY	24,461,934	6,051	(7,848)	(177)	(3,885)
	KRW	153,305	Others		(1,377)	(242)	(1,134)	142
	USD	2,307,415	KRW	2,603,838	82,276	78,393	43,787	(19,061)
	EUR	415,594	KRW	557,771	(16,071)	(5,301)	(4,998)	5,112
	JPY	29,201,574	KRW	337,724	(35,143)	2,295	(8,735)	(19)
	Others		KRW	155,317	1,916	(749)	2,815	(132)
	GBP and others		EUR and others		3,037	(19,780)	(7,632)	(698)
	Long-term borrowings denominated in foreign currency (*3)	KRW	210,710	USD	200,000	-	-	-
Embedded derivatives and others (*4)					(447)	39,412	-	-
Put back option (See 9-2)					(6,800)	(6,955)	-	-
					<u>(276,674)</u>	<u>(175,795)</u>	<u>(7,904)</u>	<u>140,210</u>
Tax effect					-	-	2,096	-
Adjustments for consolidation					-	-	<u>24,423</u>	-
					<u>₩ (276,674)</u>	<u>₩ (175,795)</u>	<u>₩ 18,615</u>	<u>₩ 140,210</u>

(\*1) In consideration of the amounts adjusted in revenue, the effective portion of changes in fair value of cash flow hedges amounting to ₩18,615 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 ₩185,271 million and firm commitment liabilities of ₩45,061 million were recognized in the consolidated statement of financial position by applying the fair value hedge accounting.

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

(\*4) Represents amounts related to the exchange rights on exchangeable bonds issued by the Company and the valuation of the contract between the Company and the shareholders of redeemable convertible preferred stock issued by 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 comprehensive income (loss) (*1)	Firm commitment assets (liabilities) (*2)		
Foreign currency forward	KRW	6,376,222	USD 5,857,419	₩ (93,400)	₩ (122,533)	₩ (24,052)	₩ 43,549		
	KRW	287,154	EUR 202,778	13,233	2,328	11,980	(1,461)		
	KRW	301,941	JPY 28,539,929	23,479	20,384	15,686	(19,431)		
	KRW	103,522	Others	3,608	397	966	(2,629)		
	USD	2,388,001	KRW 2,643,095	(7,288)	35,228	10,144	(17,409)		
	EUR	321,234	KRW 461,702	(24,431)	(10,393)	(14,437)	8,325		
	JPY	37,720,809	KRW 462,015	(93,138)	(19,333)	(61,600)	4,516		
		Others	KRW 82,252	(3,508)	(1,338)	(1,637)	1,561		
		GBP and others	EUR and others	(27,689)	(20,399)	(13,509)	(1,061)		
	Long-term borrowings denominated in foreign currency (*3)	KRW	152,160	USD 150,000	-	-	-	12,720	
Embedded derivatives and others (*4)				(39,860)	(73,084)	-	-		
Put back option (See 9-2)				(167)	(682)	-	-		
				(249,161)	(189,425)	(76,459)	28,680		
Tax effect				-	-	18,763	-		
Adjustments for consolidation				-	-	20,756	-		
				₩ (249,161)	₩ (189,425)	₩ (36,940)	₩ 28,680		

(\*1) In consideration of the amounts adjusted in revenue, the effective portion of changes in fair value of cash flow hedges amounting to ₩(36,940) 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 ₩120,695 million and firm commitment liabilities of ₩92,015 million were recognized in the consolidated statement of financial position by applying the fair value hedge accounting.

(\*3) The Group designated its long-term borrowings denominated in foreign currencies as hedging instruments to hedge the fluctuations of foreign currency denominated sales as at December 31, 2014.

(\*4) Represents amounts related to the exchange rights on exchangeable bonds issued by the Company and the valuation of the share purchase contract between the Company and the shareholders of redeemable convertible preferred stock issued by 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).

**9-2. Option contract given to financial investors**

DEC, a subsidiary, participated in SOC projects and other infrastructure projects including Shinbundang Line, Shinbundang extension Line, Daegu 4th beltway, Masan Sewer Pipeline BTL, Suwon-Gwangmyeong Road, Gwanggyo Power Center, etc. as a construction investor. To invite financial investors, DEC entered into a put option contract (₩32,000 million). DEC classified the contract as financial derivatives and recognized the fluctuation of option value as loss on valuation of derivatives (2015: ₩6,955 million, 2014: ₩682 million) and derivatives liabilities (2015: ₩6,800 million, 2014: 167 million).

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**9. Derivative financial instruments (cont'd)**

9-3. In connection with the issuance of redeemable convertible preferred shares by DEC, the Company entered into a contract with preferred shareholders. The details of contract are as follows:

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

The Group recognized the fair value of above contracts between shareholders as derivative financial instruments as at December 31, 2015.

**10. Categories of financial instruments**

10-1. 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	₩	-	₩	1,893,008	₩	-	₩	-	₩	-	₩	1,893,008	₩	1,893,008
Short and long-term financial instruments		-		553,225		-		-		-		553,225		553,225
Short and long-term investments in securities		-		-		182,511		8,350		-		190,861		190,861
Derivative financial assets		36,476		-		-		-		51,929		88,405		88,405
Trade and other receivables		-		4,225,543		-		-		-		4,225,543		4,225,543
Deposits		-		253,323		-		-		-		253,323		253,323
	₩	36,476	₩	6,925,099	₩	182,511	₩	8,350	₩	51,929	₩	7,204,365	₩	7,204,365



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**10. Categories of financial instruments (cont'd)**

	2014						Carrying amount	Fair value
	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			
Cash and cash equivalents	₩ -	₩ 1,297,560	₩ -	₩ -	₩ -	₩ 1,297,560	₩ 1,297,560	
Short and long-term financial instruments	-	676,194	-	-	-	676,194	676,194	
Short and long-term investments in securities	-	-	183,017	36,310	-	219,327	219,327	
Derivative financial assets	12,102	-	-	-	53,152	65,254	65,254	
Trade and other receivables	-	4,284,485	-	-	-	4,284,485	4,284,485	
Deposits	-	309,024	-	-	-	309,024	309,024	
	<u>₩ 12,102</u>	<u>₩ 6,567,263</u>	<u>₩ 183,017</u>	<u>₩ 36,310</u>	<u>₩ 53,152</u>	<u>₩ 6,851,844</u>	<u>₩ 6,851,844</u>	

10-2. 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	₩ -	₩ 3,099,574	₩ -	₩ 3,099,574	₩ 3,099,574
Borrowings and debentures	-	12,570,556	-	12,570,556	12,570,556
Derivative financial liabilities	36,542	-	328,537	365,079	365,079
Financial guarantee liabilities	-	22,699	-	22,699	22,699
Others	-	539,716	-	539,716	539,716
	<u>₩ 36,542</u>	<u>₩ 16,232,545</u>	<u>₩ 328,537</u>	<u>₩ 16,597,624</u>	<u>₩ 16,597,624</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	₩ -	₩ 3,463,000	₩ -	₩ 3,463,000	₩ 3,463,000
Borrowings and debentures	-	11,646,079	-	11,646,079	11,646,079
Derivative financial liabilities	69,291	-	245,125	314,416	314,416
Financial guarantee liabilities	-	220,322	-	220,322	220,322
Others	-	535,667	-	535,667	535,667
	<u>₩ 69,291</u>	<u>₩ 15,865,068</u>	<u>₩ 245,125</u>	<u>₩ 16,179,484</u>	<u>₩ 16,179,484</u>

10-3. The Group 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).

**10. Categories of financial instruments (cont'd)**

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 primarily comprise 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.

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	₩ -	₩ 36,476	₩ -	₩ 36,476
Available-for-sale financial assets	2,781	-	126,385	129,166
Derivatives designated as hedging instruments	-	51,929	-	51,929
	<u>₩ 2,781</u>	<u>₩ 88,405</u>	<u>₩ 126,385</u>	<u>₩ 217,571</u>
Financial liabilities measured at fair value:				
Financial liabilities at fair value through profit or loss	-	36,542	-	36,542
Derivatives designated as hedging instruments	-	328,537	-	328,537
	<u>₩ -</u>	<u>₩ 365,079</u>	<u>₩ -</u>	<u>₩ 365,079</u>
	2014			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value:				
Financial assets at fair value through profit or loss	₩ -	₩ 12,102	₩ -	₩ 12,102
Available-for-sale financial assets	986	-	130,721	131,707
Derivatives designated as hedging instruments	-	53,152	-	53,152
	<u>₩ 986</u>	<u>₩ 65,254</u>	<u>₩ 130,721</u>	<u>₩ 196,961</u>
Financial liabilities measured at fair value:				
Financial liabilities at fair value through profit or loss	-	69,291	-	69,291
Derivatives designated as hedging instruments	-	245,125	-	245,125
	<u>₩ -</u>	<u>₩ 314,416</u>	<u>₩ -</u>	<u>₩ 314,416</u>

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

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**10. Categories of financial instruments (cont'd)**

Assumptions used for the measurement of available-for-sale financial assets at fair value based on level 3 valuation techniques as at December 31, 2015 are as follows (Korean won in millions):

	Valuation techniques	Discount rate	Note
Incheon-Kimpo Expressway Co., Ltd. and others	Fair value as a current exit price model	-	Current share issuance amount
Daegu South Circulation Road Corporation and others	Dividend discount model and others	7.00%~14.00%	Expected dividend cash flow for each financial period and others
Korea Housing Guarantee Co., Ltd.	Shareholder's discounted cash flow model	10.00%	Shareholder's cash flow
Others	Net asset value assessment and others	-	Fair value of net asset and others

Changes in the carrying amount of available-for-sale financial assets measured at fair value based on level 3 valuation techniques for the years ended December 31, 2015 and 2014 are as follows: (Korean won in millions)

	January 1	Buy	Sell	Total comprehensive income		Net foreign exchange difference	December 31
				Profit for the year	Other comprehensive income		
2015	₩ 130,721	₩ 7,141	₩ (11,553)	₩ -	₩ 60	₩ 16	₩ 126,385
2014	122,961	7,091	(1,401)	-	2,070	-	130,721

10-4. Gains or losses on financial instruments for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015						
	Profit or loss						Other comprehensive income (loss) (*1)
	Interest income (expense)	Dividend income	(Reversal of) allowance for doubtful accounts	Impairment loss on financial instruments	Gain or loss on disposal	Gain or loss on financial guarantee	
Financial assets:							
Trade and other receivables	₩ 43,712	₩ -	₩ (556,435)	₩ -	₩ (13,935)	₩ -	₩ -
Deposits	-	-	142	-	-	-	-
Available-for-sale financial assets	371	1,646	-	(708)	11,275	-	(3,404)
Held-to-maturity financial assets	1,116	-	-	-	-	-	-
	<u>₩ 45,199</u>	<u>₩ 1,646</u>	<u>₩ (556,293)</u>	<u>₩ (708)</u>	<u>₩ (2,660)</u>	<u>₩ -</u>	<u>₩ (3,404)</u>
Financial liabilities:							
Financial liabilities carried at amortized cost	₩ (629,790)	₩ -	₩ -	₩ -	₩ (1,938)	₩ (18,268)	₩ -

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

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**10. Categories of financial instruments (cont'd)**

	2014							Other comprehensive income (loss) (*1) Net change in fair value of available-for-sale financial assets
	Interest income (expense)	Dividend income	Profit or loss			Gain or loss on financial guarantee	Gain or loss on disposal	
			(Reversal of) allowance for doubtful accounts	Impairment loss on financial instruments				
Financial assets:								
Trade and other receivables	₩ 51,985	₩ -	₩ (165,626)	₩ -	₩ (23,440)	₩ -	₩ -	₩ -
Deposits	-	-	9	-	-	-	-	-
Available-for-sale financial assets	1,463	537	-	(7,285)	30	-	-	1,911
Held-to-maturity financial assets	2,199	-	-	-	-	-	-	-
	<u>₩ 55,647</u>	<u>₩ 537</u>	<u>₩ (165,617)</u>	<u>₩ (7,285)</u>	<u>₩ (23,410)</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 1,911</u>
Financial liabilities:								
Financial liabilities carried at amortized cost	₩ (639,638)	₩ -	₩ -	₩ -	₩ (38,359)	₩ (20,842)	₩ -	₩ -

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

Gains or losses 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.

Details of gains and losses on valuation and settlement of derivative financial instruments for the years ended December 31, 2015 and 2014 is 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) (*1)
Derivatives held for trading	₩ 64,549	₩ 8,858	₩ -
Fair value hedge derivatives	(232,199)	(18,466)	-
Cash flow hedge derivatives	(8,145)	28,258	15,254
	<u>₩ (175,795)</u>	<u>₩ 18,650</u>	<u>₩ 15,254</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) (*1)
Derivatives held for trading	₩ (70,597)	₩ 18,645	₩ -
Fair value hedge derivatives	(76,110)	3,688	-
Cash flow hedge derivatives	(42,728)	(20,933)	(6,041)
	<u>₩ (189,435)</u>	<u>₩ 1,400</u>	<u>₩ (6,041)</u>

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

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**10. Categories of financial instruments (cont'd)**

Above gains or losses on financial instruments include amounts in selling and administrative expenses, finance income or cost and other comprehensive income or loss. Gains or losses from 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.

10-5. Financial assets and financial liabilities subject to an enforceable master netting arrangement or similar agreement as at December 31, 2015 are 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 associates and joint ventures**

11-1 Details of share of investments in associates and joint ventures as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Country of domicile	Equity ownership (%)	Acquisition cost		Book value		Net assets	
			2015	2014	2015	2014	2015	2014
<b>Associates:</b>								
Doosan Capital Co., Ltd. (*1)	Korea	-	₩ -	₩ 166,000	₩ -	₩ 48,902	₩ -	₩ 38,905
Tamra Offshore Wind Power Co., Ltd. ("Tamra")	Korea	36.00	9,864	9,864	9,617	9,673	9,617	9,673
Doosan (China) Financial Leasing Corp. ("DCFL") (*2)	China	-	-	96,248	-	96,996	-	83,783
Dalian Samyoung Doosan Metal Product Co., Ltd. ("DSDMP") (*3)	China	10.80	2,675	2,675	3,453	3,647	3,453	3,647
Shinbundang Railroad Co., Ltd. (*4)	Korea	29.03	62,552	62,552	26,770	46,538	26,770	46,538
Kyunggi Railroad Co., Ltd.	Korea	7.91	7,067	7,067	5,277	5,737	5,277	5,737
Neo Trans Co., Ltd.	Korea	42.86	43	43	15,429	13,335	15,429	13,335
New Seoul Railway Corporation	Korea	32.65	1,373	1,373	611	727	409	525
Others		-	2,489	2,707	-	-	-	(209)
			<u>86,063</u>	<u>348,529</u>	<u>61,157</u>	<u>225,555</u>	<u>60,955</u>	<u>201,934</u>
<b>Joint ventures:</b>								
Haman Industrial Complex (*5)	Korea	80.00	3,600	3,600	-	1,190	(2,040)	1,190
Xuzhou Xugong Doosan Engine Co., Ltd. ("Xuzhou")	China	50.00	16,232	16,232	-	-	-	-
Doosan PSI LLC (*6)	USA	50.00	1,108	-	1,254	-	1,254	-
			<u>20,940</u>	<u>19,832</u>	<u>1,254</u>	<u>1,190</u>	<u>(786)</u>	<u>1,190</u>
			<u>₩ 107,003</u>	<u>₩ 368,361</u>	<u>₩ 62,411</u>	<u>₩ 226,745</u>	<u>₩ 60,169</u>	<u>₩ 203,124</u>

(\*1) Investments in the investee were disposed in 2015.

(\*2) The investee has been included as a subsidiary as the Company acquired control over the investee during the year 2015.

(\*3) Although the Group's equity interest in the investee is less than 20%, the investee is classified as an associate considering the exercise of voting rights in the board of directors.

(\*4) Investments in the investee have been provided as collateral in connection with project financing.

(\*5) Although the Group's equity interest in the investee is more than 50%, the investee is classified as a joint venture considering the agreement between the shareholders.

(\*6) The investee is classified as a joint venture as the decisions about the investee's operations or financial policies require the consent of other equity holders.

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

11-2. Changes in share of investments in associates and joint ventures for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015						
	January 1	Acquisition (disposal)	Dividend received	Share of profit (loss) (*1)	Changes in equity adjustments	Others	December 31
<b>Associates:</b>							
Doosan Capital Co., Ltd.	₩ 48,902	₩ (6,613)	₩ -	₩ (42,389)	₩ 100	₩ -	₩ -
Tamra	9,673	-	-	(56)	-	-	9,617
DCFL	96,996	-	-	(19,137)	-	(77,859)	-
DSDMP	3,647	-	-	(230)	36	-	3,453
Shinbundang Railroad Co., Ltd.	46,538	-	-	(19,768)	-	-	26,770
Kyunggi Railroad Co., Ltd.	5,737	-	-	(460)	-	-	5,277
Neo Trans Co., Ltd.	13,335	-	-	2,094	-	-	15,429
New Seoul Railway Corporation	727	-	-	(116)	-	-	611
	<u>225,555</u>	<u>(6,613)</u>	<u>-</u>	<u>(80,062)</u>	<u>136</u>	<u>(77,859)</u>	<u>61,157</u>
<b>Joint ventures:</b>							
Haman Industrial Complex	1,190	-	-	(1,190)	-	-	-
Doosan PSI LLC	-	1,108	-	79	-	67	1,254
	<u>1,190</u>	<u>1,108</u>	<u>-</u>	<u>(1,111)</u>	<u>-</u>	<u>67</u>	<u>1,254</u>
	<u>₩ 226,745</u>	<u>₩ (5,505)</u>	<u>₩ -</u>	<u>₩ (81,173)</u>	<u>₩ 136</u>	<u>₩ (77,792)</u>	<u>₩ 62,411</u>

(\*1) The above income on equity method investments includes loss on disposal of investment in associates amounting to ₩40,935 million. With respect to changes in equity interest resulting from increase in paid-in capital of associates, the Group recognized income on an equity method investments amounting to ₩509 million.

	2014						
	January 1	Acquisition (disposal)	Dividend received	Share of profit (loss) (*1)	Changes in equity adjustments	Others	December 31
<b>Associates:</b>							
Doosan Capital Co., Ltd.	₩ 105,511	₩ -	₩ -	₩ (57,909)	₩ 1,300	₩ -	₩ 48,902
Tamra	9,622	-	-	51	-	-	9,673
DCFL	101,371	-	-	(5,790)	-	1,415	96,996
DSDMP	3,390	-	-	197	60	-	3,647
Shinbundang Railroad Co., Ltd.	67,785	-	-	(21,247)	-	-	46,538
Kyunggi Railroad Co., Ltd.	4,946	18	-	773	-	-	5,737
Neo Trans Co., Ltd.	10,745	-	-	2,590	-	-	13,335
New Seoul Railway Corporation	776	250	-	(299)	-	-	727
Others	25	(25)	-	212	-	(212)	-
	<u>304,171</u>	<u>243</u>	<u>-</u>	<u>(81,422)</u>	<u>1,360</u>	<u>1,203</u>	<u>225,555</u>
<b>Joint ventures:</b>							
Haman Industrial Complex	2,394	-	-	(1,204)	-	-	1,190
Hanjung Power Ltd.	6,066	(6,066)	(1,494)	2,767	(1,103)	(170)	-
Doosan Babcock WLL	290	-	-	-	-	(290)	-
	<u>8,750</u>	<u>(6,066)</u>	<u>(1,494)</u>	<u>1,563</u>	<u>(1,103)</u>	<u>(460)</u>	<u>1,190</u>
	<u>₩ 312,921</u>	<u>₩ (5,823)</u>	<u>₩ (1,494)</u>	<u>₩ (79,859)</u>	<u>₩ 257</u>	<u>₩ 743</u>	<u>₩ 226,745</u>

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

(\*1) The above income on equity method investments includes on equity method investments included net gain on disposal of investment in associates amounting to ₩2,979 million. With respect to changes in equity interest resulting from increase in paid-in capital of associates, the Group recognized income on an equity method investments amounting to ₩1,204 million.

11-3. Summarized financial information of associates and joint ventures as at and for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

Company	2015				
	Asset	Liability	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Tamra	₩ 90,810	₩ 64,095	₩ -	₩ (154)	₩ (154)
DSDMP	49,609	17,637	21,986	(2,129)	(1,799)
Shinbundang Railroad Co., Ltd.	1,009,219	917,002	59,663	(68,094)	(68,094)
Kyunggi Railroad Co., Ltd.	577,382	510,694	-	(12,115)	(12,115)
Neo Trans Co., Ltd.	44,655	8,656	57,487	4,886	4,886
New Seoul Railway Haman Industrial Complex Corporation	5,223	3,971	-	(357)	(357)
Doosan PSI LLC	24,866	27,416	131	(835)	(835)
	3,860	1,353	4,855	158	158

  

Company	2014				
	Asset	Liability	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Doosan Capital Co., Ltd.	₩ 1,661,977	₩ 1,502,567	₩ 85,809	₩ (118,784)	₩ (115,034)
Tamra	26,880	12	-	93	93
DCFL	789,214	618,229	45,660	(10,020)	(7,119)
DSDMP	54,149	20,378	25,813	1,824	2,377
Shinbundang Railroad Co., Ltd.	1,045,533	885,221	56,004	(73,188)	(73,188)
Kyunggi Railroad Co., Ltd.	290,498	246,577	-	(3,318)	(3,318)
Neo Trans Co., Ltd.	35,546	4,433	47,226	6,044	6,044
New Seoul Railway Corporation	5,280	3,671	-	(976)	(976)
Haman Industrial Complex	50,281	48,793	10,525	(446)	(446)

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

11-4. The following table provides a reconciliation of the summarized financial information of the associates and joint ventures to the carrying amount of its interest in the associates and joint ventures (Korean won in millions):

Company (*1)	2015						
	Net asset (a)	Equity ownership (%) (b)	Equity interest in the investee (axb)	Adjustment amount			Book value
				Difference	Internal transaction	Others	
Associates:							
Tamra	₩ 26,715	36.00	₩ 9,617	₩ -	₩ -	₩ -	₩ 9,617
DSDMP Shinbundang Railroad Co., Ltd.	31,972	10.80	3,453	-	-	-	3,453
Kyunggi Railroad Co., Ltd.	92,217	29.03	26,770	-	-	-	26,770
Neo Trans Co., Ltd.	66,689	7.91	5,277	-	-	-	5,277
New Seoul Railway	35,999	42.86	15,429	-	-	-	15,429
	1,252	32.65	409	202	-	-	611
	<u>254,844</u>		<u>60,955</u>	<u>202</u>	<u>-</u>	<u>-</u>	<u>61,157</u>
Joint ventures:							
Doosan PSI LLC	2,507	50.00	1,254	-	-	-	1,254
	<u>₩ 257,351</u>		<u>₩ 62,209</u>	<u>₩ 202</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 62,411</u>

(\*1) Adjustments on Haman Industrial Complex were not included as the Company discontinued recognizing its share of further losses.

Company	2014						
	Net asset (a)	Equity ownership (%) (b)	Equity interest in the investee (axb)	Adjustment amount			Book value
				Difference	Internal transaction	Others	
Associates:							
Doosan Capital Co., Ltd. (*1)	₩ 76,124	33.30	₩ 38,905	₩ 9,997	₩ -	₩ -	₩ 48,902
Tamra	26,868	36.00	9,673	-	-	-	9,673
DCFL	170,985	49.00	83,783	13,213	-	-	96,996
DSDMP Shinbundang Railroad Co., Ltd.	33,771	10.80	3,647	-	-	-	3,647
Kyunggi Railroad Co., Ltd.	160,312	29.03	46,538	-	-	-	46,538
Neo Trans Co., Ltd.	43,921	13.06	5,737	-	-	-	5,737
New Seoul Railway Corporation	31,113	42.86	13,335	-	-	-	13,335
	1,609	32.65	525	202	-	-	727
Others	(209)	-	(209)	-	-	209	-
	<u>544,494</u>		<u>201,934</u>	<u>23,412</u>	<u>-</u>	<u>209</u>	<u>225,555</u>
Joint ventures:							
Haman Industrial Complex	1,488	80.00	1,190	-	-	-	1,190
	<u>₩ 545,982</u>		<u>₩ 203,124</u>	<u>₩ 23,412</u>	<u>₩ -</u>	<u>₩ 209</u>	<u>₩ 226,745</u>



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

(\*1) The net asset value of Doosan Capital represents only the equity holders of the parent and the equity interest in the investee was calculated by adding up the equity ownership of preferred shares.

**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	₩ 4,072,078	₩ 1,613,155	₩ 1,062,511	₩ 228,076	₩ 214,320	₩ 7,190,140
Acquisitions / capital expenditure	138,447	6,803	29,807	34,746	239,161	448,964
Transfer	(120,719)	(11,938)	127,831	19,862	(225,321)	(210,285)
Disposals	(12,982)	(11,930)	(11,453)	(3,842)	-	(40,207)
Depreciation	-	(86,622)	(208,008)	(75,680)	-	(370,310)
Impairment loss	(746)	(73,207)	(38,326)	(17,336)	-	(129,615)
Revaluation	473,623	-	-	-	-	473,623
Business transfer and others	(129,337)	(17,292)	(12,434)	(378)	(116)	(159,557)
Changes in foreign currency translation	(4,742)	7,206	503	554	304	3,825
As at December 31	₩ 4,415,622	₩ 1,426,175	₩ 950,431	₩ 186,002	₩ 228,348	₩ 7,206,578
Acquisition cost	2,862,653	2,350,329	2,872,214	766,878	228,348	9,080,422
Accumulated depreciation and impairment loss	(1,224)	(924,154)	(1,921,783)	(580,876)	-	(3,428,037)
Accumulated gain on revaluation of land	1,554,193	-	-	-	-	1,554,193

  

	2014					
	Land	Buildings & structures	Machinery	Others	Construction-in-progress	Total
As at January 1	₩ 4,082,326	₩ 1,583,684	₩ 1,122,030	₩ 239,122	₩ 204,662	₩ 7,231,824
Acquisitions / capital expenditure	749	31,975	79,956	46,825	217,756	377,261
Transfer	300	98,725	104,040	24,498	(206,511)	21,052
Disposals	(3,286)	(1,865)	(10,708)	(1,666)	(277)	(17,802)
Depreciation	-	(87,505)	(219,342)	(79,818)	-	(386,665)
Impairment loss	(2,224)	(8,244)	(1,118)	(657)	-	(12,243)
Changes in foreign currency translation	(5,787)	(3,615)	(12,347)	(228)	(1,310)	(23,287)
As at December 31	₩ 4,072,078	₩ 1,613,155	₩ 1,062,511	₩ 228,076	₩ 214,320	₩ 7,190,140
Acquisition cost	2,939,989	2,421,844	2,876,330	764,364	214,320	9,216,847
Accumulated depreciation and impairment loss	(2,335)	(808,689)	(1,813,819)	(536,288)	-	(3,161,131)
Accumulated gain on revaluation of land	1,134,424	-	-	-	-	1,134,424

As at December 31, 2015, certain property, plant and equipment have been pledged as collateral for borrowings (See Note 34).

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**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	₩ 2,135	₩ 3,572
Interest rate of borrowing costs	3.88% ~ 4.49%	4.32% ~ 4.59%

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	₩ 320,747	₩ 330,559
Selling and administrative expenses	28,247	38,568
Research and development costs and others	20,158	14,822
Profit for the year from a discontinued operation	1,158	2,716
	<u>₩ 370,310</u>	<u>₩ 386,665</u>

12-4. Revaluation of land

The Group engaged 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 ₩2,861,429 million as at December 31, 2015.

Changes in other comprehensive income from revaluation of land are as follows (Korean won in millions):

	2015	2014
As at January 1	₩ 734,366	₩ 734,444
Increase in accumulated OCI from revaluation of land	471,211	(253)
Tax effect of accumulated OCI from revaluation of land	(111,463)	61
Disposal of land revalued	(17,159)	-
Non-controlling interests	(62,283)	114
As at December 31	<u>₩ 1,014,672</u>	<u>₩ 734,366</u>

Gain on the revaluation of land which is reflected in the profit for the year is ₩2,412 million.

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**13. Intangible assets**

13-1. 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	₩ 4,558,361	₩ 1,148,142	₩ 898,549	₩ 258,293	₩ 6,863,345
Acquisitions / capital expenditures	-	2,221	236,168	15,568	253,957
Transfer	-	207	(7,181)	45,861	38,887
Disposals	-	(10)	-	(2,429)	(2,439)
Business transfer and others	(63,179)	-	-	-	(63,179)
Amortization	-	(17,270)	(123,613)	(73,361)	(214,244)
Impairment	(42,112)	-	(121,759)	(32,959)	(196,830)
Changes in foreign currency translation	(59,423)	25,392	9,990	2,318	(21,723)
As at December 31	₩ 4,393,647	₩ 1,158,682	₩ 892,154	₩ 213,291	₩ 6,657,774
Acquisition cost	4,433,884	1,307,086	1,575,243	775,001	8,091,214
Amortization and accumulated impairment loss	(40,237)	(148,404)	(683,089)	(561,710)	(1,433,440)

  

	2014				
	Goodwill	Industrial property rights	Development costs	Others	Total
As at January 1	₩ 4,680,873	₩ 1,176,404	₩ 768,636	₩ 298,670	₩ 6,924,583
Acquisitions / capital expenditures	-	1,338	238,528	20,830	260,696
Transfer	-	-	(2,861)	16,134	13,273
Disposals	-	(12)	(184)	(3,327)	(3,523)
Amortization	-	(18,161)	(92,131)	(72,585)	(182,877)
Impairment	-	-	(12,302)	(801)	(13,103)
Changes in foreign currency translation	(122,512)	(11,427)	(1,137)	(628)	(135,704)
As at December 31	₩ 4,558,361	₩ 1,148,142	₩ 898,549	₩ 258,293	₩ 6,863,345
Acquisition cost	4,558,361	1,289,373	1,295,589	720,244	7,863,567
Amortization and accumulated impairment loss	-	(141,231)	(397,040)	(461,951)	(1,000,222)

The carrying amounts of intangible assets with indefinite useful lives including goodwill and others as at December 31, 2015 and 2014 amounted to ₩5,564,098 million and ₩5,704,519 million, respectively.

13-2. Research and development costs expensed as incurred for the years ended December 31, 2015 and 2014 amounted to ₩332,123 million and ₩295,176 million, respectively.

13-3. Capitalized borrowing costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Capitalized borrowing costs	₩ 9,051	₩ 9,574
Interest rate of borrowing costs	3.88% ~ 4.49%	4.32% ~ 4.59%

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**13. Intangible assets (cont'd)**

13-4. 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	₩ 134,264	₩ 104,905
Selling and administrative expenses	79,282	77,319
Research and development costs and others	568	357
Profit from a discontinued operation	130	296
	₩ 214,244	₩ 182,877

13-5. Carrying amount of goodwill allocated to each cash-generating unit ("CGU") as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Power generation	₩ 619,106	₩ 627,490
Water	6,803	6,441
DEC	72,781	81,300
DI	3,694,957	3,843,130
	₩ 4,393,647	₩ 4,558,361

The recoverable amount of CGU is determined based on a value in use calculation, and major assumptions used as at December 31, 2015 are as follows:

	Power generation	Water	DEC	DI
Long-term average growth rate	2.00%	2.00%	1.50%	2.0%~2.5%
Discount rate	8.50%	6.92%	9.50%	8.60%~11.90%

A value in use is calculated using pre-tax cash flow projections based on financial budgets approved by senior management covering a five-year period. The management assessed the total profit in the budget based on past performances and market growth forecasts. Cash flows beyond the five-year period are extrapolated using a forecast growth rates, which do not exceed the long-term average growth rate for the industry where the CGU operates in and which are consistent with estimations included in industry reports. The discount rate used is risk adjusted discount rate that reflects relevant risks specific to the related operating segment.

DI, one of subsidiaries, has recognized an impairment loss on goodwill, allocated to Doosan Infracore Norway AS as the carrying amount of ₩37,761 million exceeded the recoverable amounts. Another subsidiary, DEC has recognized impairment loss on goodwill of ₩4,441 million as a result of curtailment on its CPE segment. Other than recognized impairment losses mentioned beforehand, the Group has not recognized any impairment loss since the recoverable amount of each CGU, calculated based on value in use, exceeds the carrying amount of goodwill as at December 31, 2015. The recoverable amount may change according to changes in key assumptions. Accordingly, the Group's management regularly observes relevant turnovers and industrial trends.

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**14. Investment properties**

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

	2015		
	Land	Buildings	Total
As at January 1	₩ 37,952	₩ 30,211	₩ 68,163
Acquisitions / capital expenditures	3,660	257	3,917
Transfer	(13,743)	(23,886)	(37,629)
Disposals	(1,512)	(1,172)	(2,684)
Depreciation	-	(1,251)	(1,251)
As at December 31	₩ 26,357	₩ 4,159	₩ 30,516
Acquisition cost	26,357	9,268	35,625
Accumulated depreciation and impairment loss	-	(5,109)	(5,109)

  

	2014		
	Land	Buildings	Total
As at January 1	₩ 38,635	₩ 31,305	₩ 69,940
Transfer	-	(105)	(105)
Disposals	(683)	-	(683)
Depreciation	-	(989)	(989)
As at December 31	₩ 37,952	₩ 30,211	₩ 68,163
Acquisition cost	39,156	40,308	79,464
Accumulated depreciation and impairment loss	(1,204)	(10,097)	(11,301)

Rental income from investment properties for the years ended December 31, 2015 and 2014 are ₩2,070 million and ₩2,088 million, respectively.

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**15. Debentures and borrowings**

15-1. Short-term borrowings as at December 31, 2015 and 2014 are as follows (Korean won in millions):

Type of borrowings	Borrower (*1)	Lender	Annual interest rate (%)						
			as at December 31, 2015	2015 (*3)	2014				
Borrowings denominated in Korean won	The Company	Kookmin Bank	3.25	₩	30,000	₩	30,000		
		Nonghyup Bank	3.38 ~ 3.56		150,000		50,000		
		Shinhan Bank	2.86 ~ 3.04		100,000		50,000		
		Woori Bank	3.42 ~ 3.92		250,000		50,000		
		KDB	3.36 ~ 3.84		300,000		200,000		
		Korea EXIM Bank	2.64 ~ 3.00		268,081		57,517		
		Kyungnam Bank	3.52		20,000		-		
		Daegu Bank	3.31 ~ 3.40		40,000		-		
		Jeonbuk Bank	3.3		10,000		-		
		Factoring (*2)	-		23,008		22,158		
		Korea Exim Bank and others	2.32 ~ 5.99		534,000		388,500		
		DI	DEC	Shinhan Bank	-		-		9,900
				Nonghyup Bank	7.82		20,000		29,000
	KEB Hana Bank and others			3.35 ~ 6.71		56,833		108,511	
	KDB			5.54 ~ 5.72		59,000		43,000	
	Construction Guarantee Cooperative			1.4		24,215		24,215	
	Woori Bank			3.76 ~ 6.97		228,000		242,219	
	Industrial Bank of Korea (IBK)			11.74		15,160		19,000	
	Korea Exim Bank			5.55 ~ 6.97		57,300		59,768	
	Woori Investment Bank and others			7.50 ~ 8.02		21,000		6,000	
	Kabul Construction Co., Ltd.			6.9		100		100	
	DE	The Company	Factoring (*2)	-		76,690		23,547	
			Nonghyup Bank	3.52		10,000		-	
Kookmin Bank			4.05		10,000		-		
Woori Bank			4.05		30,000		-		
HSBC			2.00 ~ 11.3		109,871		27,404		
ICICI			11.25		38,786		30,345		
JP Morgan			3M Libor + 1.5		5,860		5,496		
KBC			-		-		51,314		
SCB			2.00 ~ 11.7		72,180		24,680		
Vietcombank			3M Libor + 2.6		23,414		-		
Borrowings denominated in foreign currencies	The Company	Kookmin Bank	3M Libor + 1.7		4,688		-		
		Shinhan Bank	3.1 ~ 10.75		8,762		11,821		
		Woori Bank	3M Libor + 2.0		103,791		72,835		
		KDB and others	0.4 ~ 0.5		243,647		230,003		
		Korea Exim Bank	3M Libor + 1.5 ~ 2.2		149,969		222,201		
		KEB Hana Bank	0.4 ~ 3.5		66,070		32,951		
			3M Euribor + 2.75 ~ 3.5						
			3M Libor + 1.8 ~ 2.1						
			LIBOR + 1.8						
			3M Euribor + 2.0						
	3M Libor + 2.7 ~ 2.8								
	3M Libor + 350bps								
	6M Libor + 2.05								

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

Type of borrowings	Borrower (*1)	Lender	Annual interest rate (%) as at December 31,					
			2015	2015 (*3)	2014			
DI		KDB and others	1.80 ~ 9.25	₩	534,180	₩ 566,481		
		Woori Bank and others	0.72 ~ 2.00		103,787	171,090		
		Disposal of bonds in foreign currency (*2)	-		84,798	27,738		
DEC		KEB Hana Bank	Libor + 0.80 ~ 2.00		8,374	11,436		
			KDB	Libor + 1.50		16,535	18,661	
		Woori Bank	Libor + 1.00 ~ 4.50		9,054	23,683		
			Shinhan Bank	-		-	328	
		Korea Exim Bank	Libor + 1.50 ~ 4.45		2,344	2,198		
			Asia Commercial Bank	Libor + 2.00		2,867	4,916	
		Vietcombank	Libor + 1.80		694	-		
		DE		Factoring (*2)	1.36 ~ 1.38		6,304	3,857
				KEB Hana bank	4.65 ~ 5.80		8,819	9,944
				Korea Exim Bank	Libor + 2.27		4,984	4,648
				₩	3,943,165	₩ 2,967,465		

(\*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

(\*2) As discounting of commercial papers with recourse do not qualify for the derecognition of a financial instrument, the Group continues to recognize the related receivables and the related amounts received as short-term borrowings.

(\*3) The Group's PP&E and others have been pledged as collateral for the above borrowings (See Note 34).

15-2. Details of debentures as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	Interest rate (%) as at December 31, 2015	2015	2014
Public subscription debentures	3.77~8.15	₩ 2,532,788	₩ 2,955,110
Private subscription debentures (*1)	3.90~8.50	340,000	380,000
Exchangeable bonds (See Note 15-3)	1.5	115,656	155,522
Convertible bonds (See Note 15-4)	3.2~4.00	311,112	200,000
Debentures denominated in foreign currencies (*2)	2.13~7.49	585,999	29,678
		3,885,555	3,720,310
Less current portion		(1,321,578)	(694,004)
Less discount on bonds payable		(15,993)	(16,507)
		₩ 2,547,984	₩ 3,009,799

(\*1) The Group's PP&E and others have been pledged as collateral for the private subscription debentures (See Note 34).

(\*2) The debentures denominated in foreign currencies are guaranteed by Korea Exim Bank (See Note 33).

15-3. The Company issued exchangeable bonds which exchange rights for equity shares in DEC. Details of the exchangeable bonds as at December 31, 2015 are as follows:

Issue date	Maturity date	Coupon rate	YTM	Exercise period	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 million	₩132,225 million

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

**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 is after every 6 months.

**Redemption at maturity**

The coupon rate for the bond is 1.5%. For bonds not exchanged with equity shares in DEC by maturity, 116.72% of the principal amount will be paid on June 14, 2016 with a yield to maturity rate of 4.5%, compounded yearly.

**Calculation of exchange price**

Pursuant to the bond subscription agreement, which there is an event resulting in an 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 period from the date of bond 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.

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)	7,897	(2,472)
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.

15-4. Convertible bonds issued by DEC as at December 31, 2015 and 2014 are summarized as follows:

15-4-1. Convertible bonds issued in 2014

Issue date	Maturity date	Coupon rate	YTM	Exercise period	Conversion price	Issuance value	Book value
Sep. 4, 2014	Sep. 4, 2017	4.00%	7.50%	From 1 month after date of issue to 1 month before maturity	₩8,190/share	₩190,798 million	₩173,407 million

**Early redemption**

The early redemption right is exercisable as a whole or in part against the par value of convertible bonds at the interest payment date in 1.5 years and 2.5 years after the date of issuance of bonds.

**Redemption at maturity**

The coupon rate for the bond is 4.0%. For bonds not converted until maturity, 111.6534% of the principal amount will be paid on Sep 4, 2017 with a yield to maturity rate of 7.5%, compounded quarterly.



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

**Calculation of conversion price**

The conversion price is adjusted when there is an increase in paid-in capital through issuance of shares at a price lower than the market price, stock dividends, or capitalization of reserves, before exercising the conversion rights, or when there is an issuance of stock purchase warrants or debt securities with warrants.

15-4-2. Convertible bonds issued in 2015

Issue date	Maturity date	Coupon rate	YTM	Exercise period	Conversion price	Issuance value	Book value
Jun. 11, 2015	Jun. 11, 2018	3.20%	6.50%	From 1 month after date of issue to 1 month before maturity	₩6,000/share	₩143,560 million	₩134,828 million

**Early redemption**

The early redemption right is exercisable as a whole or in part against the par value of convertible bonds at the interest payment date in 2 years and 2.5 years after the date of issuance of bonds.

**Redemption at maturity**

The coupon rate for the bond is 3.2%. For bonds not converted until maturity, 110.8345% of the principal amount will be paid on Jun. 11, 2018 with a yield to maturity rate of 6.5% compounded quarterly.

**Calculation of conversion price**

The conversion price is adjusted when there is an increase in paid-in capital through issuance of shares at a price lower than the market price, stock dividends, or capitalization of reserves, before exercising the conversion rights, or when there is an issuance of stock purchase warrants or debt securities with warrants.

15-4-3. Changes in the carrying amount of convertible bonds for the year ended December 31, 2015 are as follows (Korean won in millions):

	January 1	Issuance	Exercise / Amortization	December 31
Convertible bond	₩ 200,000	₩ 150,000	₩ (38,888)	₩ 311,112
Redemption premium	23,307	16,252	(4,454)	35,105
Discount on bond	(8,301)	(6,440)	5,129	(9,612)
Conversion rights adjustment	(22,531)	(20,432)	14,593	(28,370)
Book value	192,475	139,380	(23,620)	308,235
Consideration for conversion rights (Other capital surplus)	1,669	4,180	(1,686)	4,163

During the year, 14.64% of the convertible bonds issued in 2014 and 6.41% of the convertible bonds issued in 2015 were converted.

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

15-5. Long-term borrowings as at December 31, 2015 and 2014 are as follows (Korean won in millions):

Type of borrowings	Borrower (*1)	Lender	Annual interest rate (%) as at Dec.31,2015	2015 (*2)	2014	
Borrowings denominated in Korean won	The Company	Kookmin Bank	3.9	₩ 100,000	₩ -	
		Suhyup Bank	3.20 ~ 3.70	12,801	11,791	
		Hi Investment Securities	3.5	200,000	200,000	
		KDB	4.00 ~ 5.57	182,500	199,167	
		Korea Exim Bank	3.34 ~ 3.36	292,500	340,100	
		Korea Investment & Securities Co., Ltd.	-	-	100,000	
		NH Investment Securities	-	-	50,000	
		DI	KDB	3.90 ~ 4.98	156,667	185,000
		NH Investment Securities	-	-	50,000	
		Kyungnam Bank	-	-	40,000	
	DEC	DI	TY Solution 1st and 6 others	-	-	145,000
			Core Value 1st Co.,Ltd. and 2 others	4.77	100,000	200,000
			Woori Bank	4.17	40,000	40,000
			Busan Bank	4.32	4,000	12,000
			Shinhan Bank	-	-	419
			La Union Co., Ltd.	-	-	35,000
			Doosan E&C 1st Co., Ltd.	-	-	110,000
			Doosan E&C 2nd Co., Ltd.	6.46, CD + 4.73	102,000	-
			Korea Housing Guarantee Cp., Ltd.	-	-	7,267
			Kookmin Bank	2.5	412	470
DE	DE	KEB Hana Bank	-	-	18,500	
		La Union Co., Ltd.	-	-	50,000	
		Nonghyup Bank	MOR + 2.00	20,000	20,000	
		KDB	4.42	25,000	25,000	
Borrowings denominated in foreign currencies	The Company	3M CD + 2.06		30,000	-	
		Arab Bank and Others	2.33	175,800	164,880	
		KDB	3M Euribor + 2.75 ~ 3.85	120,943	270,707	
		Korea EXIM bank	Libor(3) + 6.0	268	46,961	
	DI	DI	National Bank of Abu Dhabi and others	2.79	117,200	10,992
			AKA Bank	6M Eulibor + 0.45	1,849	2,824
			KDB	3M Libor + 3.50	77,352	54,960
				3.99 ~ 4.06		
			Kookmin Bank	3M Libor + 3.10	29,300	32,976
			Bank of China	-	-	19,786
			KEB Hana Bank	3M Libor + 3.60	53,657	72,641
				4.99		
			Shinhan Bank	6M Libor + 3.35	41,020	43,968
			Korea Exim Bank	6M Libor + 4.30		
JP Morgan and 3 others	JP Morgan and 3 others	3M Libor + 4.30	720,780	687,000		
		3M Libor + 2.76				
		3M Libor + 3.50	1,382,292	1,311,907		

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

Type of borrowings	Borrower (*1)	Lender	Annual interest rate (%) as at Dec.31,2015	2015 (*2)	2014
		Innovasjon Norge	4.40	₩ 3,870	₩ 2,229
		Bank of New York	8.00	4,981	4,672
		Shell Brasil Petroleo Ltda	-	370	517
		SC Bank Beijing Branch	5.14 ~ 5.64	21,046	-
		Minsheng Financial leasing Co., Ltd.	5.23 ~ 6.30	66,241	-
		Shenzhen Development Bank Hwangjing Branch	5.00 ~ 6.61	7,002	-
		Guangda financial leasing Co., Ltd.	5.25 ~ 5.50	17,062	-
		Xinda Financial Leasing Co., Ltd.	5.27 ~ 6.30	65,493	-
		ICBC Beijing Chaoyang Branch	4.75 ~ 5.50	9,739	-
		China Development Bank Financial Leasing Co., Ltd.	6.25 ~ 6.50	2,250	-
		Woori Bank Beijing Branch	6.13 ~ 6.38	7,139	-
		Far Eastern Leasing Co., Ltd	6.20	9,916	-
		KDB Beijing Branch	5.14 ~ 5.64	26,772	-
	DE	China Construction Bank	-	-	1,591
				<u>4,228,222</u>	<u>4,568,325</u>
				(916,961)	(937,011)
				<u>(28,971)</u>	<u>(33,688)</u>
				<u>₩ 3,282,290</u>	<u>₩ 3,597,626</u>
Less current portion					
Less discount on borrowings					

(\*1) Includes the Company's overseas subsidiaries and their consolidated subsidiaries.

(\*2) The Group's PP&E and other assets have been pledged as collateral for the above borrowings (See Note 34).

**15-6. Asset-backed loans**

The Company and DEC issued asset-backed securities, through an SPE, collateralized by receivables from a range of construction projects.

Borrower	Lender	Maturity	Discount rate (%)	Amount
The Company	KDB	Dec. 16. 2018	3.89	₩ 115,000
	Shinyoung securities	Dec. 16. 2018	3.89	50,000
DEC	Woori Bank	Apr. 26. 2016	5.40	41,500
	Yujin securities and others	Mar. 30. 2016	7.80	69,500
	Shinyoung securities and others	Jan. 07. 2016	7.80	39,700
	KDB capital and others	Mar. 02. 2016	8.30	30,000
	Shinyoung securities and others	Jan. 08. 2016	7.80	33,000
	Shinyoung securities and others	Jan. 29. 2016	7.80	49,900
	Korea asset securities and others	Feb. 12. 2016	7.80	35,000
	Kiwoom securities and others	Jan. 07. 2016	6.49	45,000
	KDB	Sept. 15. 2017	8.59	40,000
				<u>548,600</u>
Less current portion				(396,100)
Less discount on borrowings				<u>(2,092)</u>
				<u>₩ 150,408</u>

**16. Employee benefits liability**

The Group operates a defined benefit plan, and the 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.

16-1. 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	₩ 2,318,673	₩ 2,418,728
Fair value of plan assets (*1)	(1,418,480)	(1,398,119)
Benefit liability per statement of financial position	<u>₩ 900,193</u>	<u>₩ 1,020,609</u>

(\*1) Include employer contributions amounting to ₩1,696 million and ₩2,191 million to the National Pension Service as at December 31, 2015 and 2014, respectively.

16-2. 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	₩ 107,537	₩ 108,252
Net interest expenses	38,415	43,113
Effect of curtailment and settlement	214	(10,116)
	<u>₩ 146,166</u>	<u>₩ 141,249</u>

16-3. Classification of expenses 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	₩ 78,246	₩ 78,210
Selling and administrative expenses	51,406	46,975
Research and development costs	16,514	16,064
	<u>₩ 146,166</u>	<u>₩ 141,249</u>

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**16. Employee benefits liability (cont'd)**

16-4. 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	₩ 2,418,728	₩ 2,134,005
Current service costs	107,537	108,252
Transfer from related parties	4,249	2,304
Transfer to related parties	(7,431)	(3,097)
Interests	84,667	93,250
Remeasurement gain (loss) in OCI:		
Actuarial changes arising from changes in demographic assumptions	(43,318)	10,284
Actuarial changes arising from changes in financial assumptions	(71,019)	206,975
Others	26,160	(702)
Effect of curtailment and settlement	(8,895)	(11,820)
Contributions by plan participants	2,611	2,380
Benefits paid	(253,398)	(136,660)
Others	58,782	13,557
As at December 31	₩ 2,318,673	₩ 2,418,728

16-5. 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	₩ 1,398,119	₩ 1,203,614
Expected return on plan assets	46,252	50,137
Transfer from related parties	2,007	1,325
Transfer to related parties	(2,972)	(607)
Remeasurement gain (loss) in OCI	(50,998)	64,876
Contributions by plan participants	2,486	2,281
Contributions by employer	162,529	186,024
Benefits paid	(162,830)	(111,205)
Effect of curtailment and settlement	(7,117)	(1,704)
Others	31,004	3,378
As at December 31	₩ 1,418,480	₩ 1,398,119

In relation to the defined benefit plans, the reasonable estimates of future employer contributions during the year 2016 amounts to ₩143,591 million. In addition, the actual return on plan assets for the years ended December 31, 2015 and 2014 amounts to ₩(4,746) million and ₩115,013 million, respectively.

16-6. The principal assumptions used in determining employee benefit liability as at December 31, 2015 and 2014 are as follows:

	2015	2014
Discount rate	2.60% ~ 7.73%	1.80% ~ 8.40%
Future salary increase rate	2.00% ~ 8.00%	0.00% ~ 8.00%

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**16. Employee benefits liability (cont'd)**

16-7. Components of plan assets as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Equity investments	₩ 561,525	₩ 436,974
Korean government bonds	418,631	560,494
Trust assets and others	438,324	400,651
	₩ 1,418,480	₩ 1,398,119

The majority of the employee benefit plan consists of quoted securities in active markets.

16-8. Details of a sensitivity analysis on the defined benefit obligation for changes in the significant assumptions as at December 31, 2015 are as follows (Korean won in millions):

	Amount	Ratio
Discount rate:		
1% increase	₩ (186,014)	(8.02%)
1% decrease	222,827	9.61%
Future salary increases:		
1% increase	43,832	1.89%
1% decrease	(39,911)	(1.72%)

16-9. The maturity profile 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
Amounts	₩ 145,889	₩ 199,743	₩ 502,707	₩ 825,836	₩ 1,674,175

16-10. With regard to the defined contribution pension plans, the Group recognized expenses amounting to ₩17,696 million (2014: ₩22,807 million).

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**17. 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	Others (*1)	December 31	Current	Non-current
Construction warranties	₩	373,775	₩ 101,275	₩ (71,916)	₩ (37,368)	₩ 6,815	₩ 372,581	₩ (128,339)	₩ 244,242
Returned goods		1,197	1,513	(261)	(370)	-	2,079	(2,079)	-
	₩	<u>374,972</u>	<u>₩ 102,788</u>	<u>₩ (72,177)</u>	<u>₩ (37,738)</u>	<u>₩ 6,815</u>	<u>₩ 374,660</u>	<u>₩ (130,418)</u>	<u>₩ 244,242</u>

(\*1) Includes gain or loss arising from changes in foreign exchange rates.

		2014							
		January 1	Arising during the year	Unused amounts reversed	Utilized	Others (*1)	December 31	Current	Non-current
Construction warranties	₩	417,493	₩ 95,850	₩ (74,213)	₩ (63,507)	₩ (1,848)	₩ 373,775	₩ (136,027)	₩ 237,748
Returned goods		858	1,354	(1,015)	-	-	1,197	(1,197)	-
	₩	<u>418,351</u>	<u>₩ 97,204</u>	<u>₩ (75,228)</u>	<u>₩ (63,507)</u>	<u>₩ (1,848)</u>	<u>₩ 374,972</u>	<u>₩ (137,224)</u>	<u>₩ 237,748</u>

(\*1) Includes gain or loss arising from changes in foreign exchange rates.

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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
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**18. 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 (number of share, Korean won in millions):

	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
As at Jan 1, 2015	106,158,256	13,203,540	₩ 530,791	₩ 66,018	₩ 596,809	₩ 73,011	₩ 306,662	₩ 379,673
As at Dec 31, 2015	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 at 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	<ul style="list-style-type: none"> <li>① 1 ~ 5 years: early redemption is available to the extent of 10% of total preferred stock with 10% plus issuance price.</li> <li>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)</li> <li>③ 5 ~ 10 years: redeemable with adjusted amount based on the rate of returns posted by the private bond value appraisal institutions.</li> </ul>
Convertible right	<ul style="list-style-type: none"> <li>① Convertible all or some portion of preferred stocks</li> <li>② Conversion period: 1~10 years after the payment date</li> <li>③ Conversion ratio: 1 common stock to 1 preferred stock</li> </ul>

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.



**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
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**19. 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		589,983		854,350
	₩	<u>1,563,918</u>	₩	<u>1,828,285</u>

**20. Other components of equity**

20-1. Other components of equity as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Treasury shares	₩	(175,901)	₩	(175,901)
Stock options		11,988		13,104
Others		58,756		61,001
	₩	<u>(105,157)</u>	₩	<u>(101,796)</u>

20-2. Treasury shares as at December 31, 2015 and 2014 are as follows (Korean won in millions, number of shares):

	2015		2014	
	Number of shares	Amount	Number of shares	Amount
Ordinary stock	7,312,505	₩ 90,261	7,312,505	₩ 90,261
Preferred stock	<u>3,025,532</u>	<u>85,640</u>	<u>3,025,532</u>	<u>85,640</u>
	<u>10,338,037</u>	<u>₩ 175,901</u>	<u>10,338,037</u>	<u>₩ 175,901</u>

20-3. 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.

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**20. Other components of equity (cont'd)**

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

Grant date	Number of shares to be issued	Exercise period	Exercise price	Estimated fair value as of 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>			

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>
	Valuation			
Grant date	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>

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**20. Other components of equity (cont'd)**

The Company's weighted average share prices at the exercise date 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 are expected to be recognized in the future periods.

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%	"	49.33%	5.67%
2008.03.21	5.25%	"	56.02%	7.33%
2009.03.27	3.71%	"	65.15%	9.00%
2010.03.26	3.82%	"	66.45%	10.00%
2011.03.25	3.66%	"	53.12%	10.00%
2012.03.30	3.57%	"	38.21%	13.33%
2013.03.29	2.45%	"	35.98%	15.00%
2014.03.28	2.88%	"	34.72%	15.00%

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

**21. Accumulated other comprehensive income (loss)**

21-1. Accumulated other comprehensive income (loss) for the years ended December 31, 2015 and 2014 are summarized as follows (Korean won in millions):

	2015	2014
Loss on valuation of available-for-sale financial assets	₩ (30,544)	₩ (203)
Gain (loss) on valuation of derivative financial instruments	18,615	(36,940)
Change in equity of equity method investments	1,337	(847)
Gain on revaluation of land	1,014,673	734,366
Loss on translation of foreign operations	(492,069)	(475,457)
	₩ 512,012	₩ 220,919

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**21. Accumulated other comprehensive income (loss) (cont'd)**

21-2. Details of income taxes on OCI items directly relected 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
Loss on valuation of available-for-sale financial assets	₩ (32,400)	₩ 1,856	₩ (30,544)
Gain on valuation of derivative financial instruments	21,064	(2,449)	18,615
Change in equity of equity method investments	1,438	(101)	1,337
Gain on revaluation of land	1,342,013	(327,340)	1,014,673
Loss on translation of foreign operations	(492,069)	-	(492,069)
	<u>₩ 840,046</u>	<u>₩ (328,034)</u>	<u>₩ 512,012</u>
	2014		
	Balance before tax	Tax effect	Balance after tax
Gain (loss) on valuation of available-for-sale financial assets	₩ 866	₩ (1,069)	₩ (203)
Loss on valuation of derivative financial instruments	(49,182)	12,242	(36,940)
Change in equity of equity method investments	(419)	(428)	(847)
Gain on revaluation of land	971,242	(236,876)	734,366
Loss on translation of foreign operations	(475,457)	-	(475,457)
	<u>₩ 447,050</u>	<u>₩ (226,131)</u>	<u>₩ 220,919</u>

**22. Retained earnings**

22-1. Retained earnings of the Group as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
Legal reserve	₩	117,868	₩	109,168
Voluntary reserve		1,079,588		1,116,594
Unappropriated retained earnings (undisposed deficit)		(184,368)		889,441
	<u>₩</u>	<u>1,013,088</u>	<u>₩</u>	<u>2,115,203</u>

22-2. Details of dividends for the years ended December 31, 2015 and 2014 are as follows:

	2015 (*1)		2014	
	Common stock	Preferred stock	Common stock	Preferred stock (*2)
Number of shares	98,845,751 shares	13,203,540 shares	98,845,751 shares	13,203,540 shares
Par value per share (Korean won in units)	₩ 5,000	₩ 5,000	₩ 5,000	₩ 5,000
Par value dividend rate	17.0%	18.6%	15.0%	18.6%
Dividends per share (Korean won in units)	₩ 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 stocks issued for the year ended December 31, 2014 was 13,203,540 shares with dividends amounting to ₩12,309 million.

**22. 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.

22-3. Pay-out ratio and dividend yield ratio for the years ended December 31, 2015 and 2014 are 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 the parent	-	-	-	-
Dividend yield ratio	Dividends per share / Share price at the reporting date	4.13%	-	3.17%	-

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

**23. Other non-controlling interests**

23-1. Hybrid instruments

Details of hybrid instruments issued by DI classified as equity as at December 31, 2015 are as follows:

	Description
Issue date	October 05, 2012
Issue price	USD 500,000,000
Maturity	30 years and automatic revolving
Dividend	Amount: 3.25% at par value, resets every 5 years, and 5% and 2% will be added after 5 and 7 years, respectively, according to a "Step up" clause. Payment: semi-annually in arrears, optional deferral of distributions is available.
Others	DI can exercise a call option on the instrument every 5 years after the issue date and every dividend payment date afterwards. Investors can exercise a put option on the instrument to Core Partners Limited, an SPE, if DI does not exercise its call option.

If investors exercise their put option and Core Partners Limited, an SPE, acquires the instruments after 5 years since the issue date, the SPE has a right to put the instruments back to DI (the "Stock Exchange Right") under which the SPE can exchange a unit of the instrument with a par value of \$15.40 for one share of DI's common stock. The hybrid instruments are classified as equity as at December 31, 2015 as they do not contain a contractual obligation for DI to settle in cash and the Stock Exchange Right confers a right to receive a fixed number of DI's common stock at the issue date.

**23. Other non-controlling interests (cont'd)**

Details of hybrid instruments issued by DPS.S.A classified as equity as at December 31, 2015 are as follows:

	Description
Issue date	December, 03, 2015
Issue price	USD 300,000,000
Maturity	30 years and automatic revolving
Dividend	Amount: 2.50% at par value, resets once after 3 years, and 1.3% will be added after 3 years, according to a "Step up" clause. Payment: semi-annually in arrears, optional deferral of distributions is available. DPS.S.A can exercise a call option on the instrument 3 years after the issue date
Others	The guarantee financial institution, Korea Exim Bank has to retain all of the hybrid instruments owned by investors, if DPS.S.A does not exercise its call option.

If Korea Exim Bank gets to retain the hybrid instruments as the investors exercise the non-call put rights after 3 years, Korea Exim Bank is awarded exchange rights, which allow an exchange of the hybrid instruments with equity shares of the Company. Korea Exim Bank, when it elects to exercise the exchange rights, is entitled to either i) an exchange of par value of USD 19.1 on the hybrid instrument with one share of common stock, or ii) a cash settlement at the issue price of USD 300 million, at the Company's decision. In this regard, the Company has provided as collateral 75,509,366 shares of DI stock and 29,650,000 shares of DE stock to Korea Exim Bank. The Company assessed that the hybrid instruments are equity securities as the instruments are exchangeable with the Company's equity securities or settled in cash at the Company's decision when the exchange rights are exercised by Korea Exim Bank.

**23-2. Redeemable convertible preferred stock**

Details of redeemable convertible preferred stock are as follows:

	Description
Issue date	December 16, 2013
Purpose of issuance	To obtain liquidity and to improve the financial structure
Issued shares	Cumulative non-participating preferred stock
Number of issued shares	22,727,272 shares
Value of issued shares	₩17,600 per share
Voting right	No voting right is awarded. However, in the case where no dividend for preferred stock is declared at the shareholders' meeting, the preferred shareholders are awarded one voting right per share from the next shareholders' meeting up to the shareholders' meeting where dividend payment for preferred stock is declared.
Dividend rate	Based on the issue price, 6.5% per year
Redemption right	Redemption: On December 16, 2016, if there is profit available for dividends, DEC can redeem all or some portion of preferred stock. Early redemption: On December 16, 2015, if there is profit available for dividends, DEC can redeem all or some portion of preferred stock (limited to 30% of total issued amount).
Conversion right	Conversion right: Both preferred stockholders and DEC hold conversion rights. However, only preferred stockholders may exercise early conversion rights. Conversion period: From March 16, 2017 to March 15, 2018 Early conversion: Preferred stockholders can convert on December 16, 2015 and 2 business days prior to such date Conversion ratio: 1 common stock per 1 preferred stock

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**23. Other non-controlling interests (cont'd)**

The Group has the redemption rights in connection with the above redeemable convertible preferred stock. As the Group has no contractual obligation to settle in cash or other financial assets, the redeemable convertible preferred stock is classified as equity securities.

**24. Segment information**

24-1. The reportable business segments of the Group and major products and services by segments are as follows:

Segment	Products and services
Power generation	NCSS, BOP, turbine and others
Water	Seawater desalination plants and water treatment systems
Industrial plants	Container handling cranes, national defense service and others
Castings & forgings	Power generation components, shipbuilding components, iron & steel making components, mold & tool steel and petrochemical & industrial components
Construction	Plant, civil engineering, architecture
Wholesale and retail	Purchasing agent service
DI	Internal combustion engines, and various construction machinery, transport equipment and others
DE	Marine engines, internal combustion engine, internal combustion generator, emergency generator for nuclear power plant and others
DEC	Apartment building and others

24-2. Summarized financial information by business segments as at and for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015				
	Sales	Intersegment sales	Net sales	Operating income (loss)	Profit (loss)
Power generation	₩ 5,615,766	₩ (320,123)	₩ 5,295,643	₩ 258,927	₩ 14,507
Water	477,627	(16,449)	461,178	(28,502)	(50,024)
Industrial plants	69,070	(20)	69,050	15,943	(28,667)
Castings & forgings	453,866	(131,020)	322,846	10,236	(2,233)
Construction	482,075	8,433	490,508	2,318	(167,887)
Wholesale and retail	11,610	(11,555)	55	395	(45,322)
DI	9,718,254	(2,504,251)	7,214,003	27,441	(859,505)
DE	704,089	(13,186)	690,903	(63,754)	(125,442)
DEC	1,820,561	(160,429)	1,660,132	(166,913)	(520,746)
	<u>19,352,918</u>	<u>(3,148,600)</u>	<u>16,204,318</u>	<u>56,091</u>	<u>(1,785,319)</u>
Consolidation adjustments	(3,148,600)	3,148,600	-	5,975	34,420
	<u>₩ 16,204,318</u>	<u>₩ -</u>	<u>₩ 16,204,318</u>	<u>₩ 62,066</u>	<u>₩ (1,750,899)</u>

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**24. Segment information (cont'd)**

	2014				
	Sales	Intersegment sales	Net sales	Operating income (loss)	Profit (loss)
Power generation	₩ 6,071,899	₩ (459,346)	₩ 5,612,553	₩ 330,336	₩ 102,649
Water	588,819	(13,198)	575,621	(983)	(38,206)
Industrial plants	139,333	(74)	139,259	(9,089)	(27,930)
Castings & forgings	497,244	(132,413)	364,831	(30,668)	(46,844)
Construction	572,219	(485)	571,734	33,342	(4,650)
Wholesale and retail	9,801	(9,801)	-	(310)	(138)
DI	10,598,898	(2,911,095)	7,687,803	452,994	23,972
DE	897,208	(11,426)	885,782	(39,596)	(42,231)
DEC	2,230,594	(96,533)	2,134,061	132,836	(68,580)
	<u>21,606,015</u>	<u>(3,634,371)</u>	<u>17,971,644</u>	<u>868,862</u>	<u>(101,958)</u>
Consolidation adjustments	(3,634,371)	3,634,371	-	9,245	16,483
	<u>₩ 17,971,644</u>	<u>₩ -</u>	<u>₩ 17,971,644</u>	<u>₩ 878,107</u>	<u>₩ (85,475)</u>

24-3. Summarized financial information on assets and liabilities by business segments as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		2014	
	Asset	Liability	Asset	Liability
Power generation	₩ 10,319,359	₩ 6,732,792	₩ 9,032,256	₩ 5,808,694
Water	952,244	612,209	1,021,478	565,552
Industrial plants	198,150	64,318	316,845	105,160
Castings & forgings	1,254,422	487,464	1,206,074	435,758
Construction	1,444,537	1,010,122	1,587,625	885,386
Wholesale and retail	201,387	77,568	265,711	56,432
DI	11,383,173	8,280,217	11,957,427	8,669,139
DE	1,406,042	831,369	1,540,297	839,595
DEC	4,225,712	2,811,405	5,133,091	3,170,495
	<u>31,385,026</u>	<u>20,907,464</u>	<u>32,060,804</u>	<u>20,536,211</u>
Consolidation adjustments	(4,124,885)	(673,431)	(4,508,897)	(661,306)
	<u>₩ 27,260,141</u>	<u>₩ 20,234,033</u>	<u>₩ 27,551,907</u>	<u>₩ 19,874,905</u>

24-4. Summarized geographic information on sales for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Sales	Intra-Group sales	Net sales
Domestic	₩ 8,182,308	₩ (1,539,121)	₩ 6,643,187
Americas	3,870,545	(492,243)	3,378,302
Asia	2,652,533	(352,095)	2,300,438
Middle East	1,399,848	-	1,399,848
Europe	3,214,521	(765,141)	2,449,380
Others	33,163	-	33,163
	<u>19,352,918</u>	<u>(3,148,600)</u>	<u>16,204,318</u>
Consolidation adjustments	(3,148,600)	3,148,600	-
	<u>₩ 16,204,318</u>	<u>₩ -</u>	<u>₩ 16,204,318</u>



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**24. Segment information (cont'd)**

	2014		
	Sales	Intra-Group sales	Net sales
Domestic	₩ 9,553,798	₩ (1,727,803)	₩ 7,825,995
Americas	3,614,459	(530,854)	3,083,605
Asia	2,978,837	(510,623)	2,468,214
Middle East	1,812,193	-	1,812,193
Europe	3,607,502	(865,091)	2,742,411
Others	39,226	-	39,226
	<u>21,606,015</u>	<u>(3,634,371)</u>	<u>17,971,644</u>
Consolidation adjustments	(3,634,371)	3,634,371	-
	<u>₩ 17,971,644</u>	<u>₩ -</u>	<u>₩ 17,971,644</u>

**25. Revenue**

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

	2015	2014
Finished goods	₩ 10,055,090	₩ 10,820,250
Construction	5,978,713	7,015,205
Others	170,515	136,189
	<u>₩ 16,204,318</u>	<u>₩ 17,971,644</u>

**26. Construction contracts**

26-1. Accumulated profit (loss) and related assets and liabilities on construction contracts as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	Accumulated construction revenue	Accumulated construction cost	Accumulated construction profit (loss)	Receivables from construction contracts-billed	Receivables from construction contracts-unbilled	Dues to customers for contract work
Power generation	₩ 27,658,253	₩ 22,939,565	₩ 4,718,688	₩ 219,450	₩ 1,140,386	₩ 653,368
Water	4,055,496	3,668,334	387,162	131,936	128,573	1,419
Industrial plants	750,561	703,137	47,424	6,567	30,301	15,745
Castings & Forgings	367,171	365,162	2,009	53,280	-	-
Plant construction	1,257,669	1,235,229	22,440	7,674	14,618	10,882
General construction	<u>2,179,703</u>	<u>2,026,072</u>	<u>153,631</u>	<u>756,117</u>	<u>113,125</u>	<u>55,382</u>
	<u>36,268,853</u>	<u>30,937,499</u>	<u>5,331,354</u>	<u>1,175,024</u>	<u>1,427,003</u>	<u>736,796</u>
Subsidiaries:						
DEC	9,714,942	8,599,549	1,115,393	1,306,672	362,170	270,789
DE	226,100	177,913	48,187	-	2,331	9,702
DPS S.A and subsidiaries	<u>9,717,433</u>	<u>8,839,573</u>	<u>877,860</u>	<u>171,555</u>	<u>191,903</u>	<u>183,311</u>
	<u>19,658,475</u>	<u>17,617,035</u>	<u>2,041,440</u>	<u>1,478,227</u>	<u>556,404</u>	<u>463,802</u>
	<u>₩ 55,927,328</u>	<u>₩ 48,554,534</u>	<u>₩ 7,372,794</u>	<u>₩ 2,653,251</u>	<u>₩ 1,983,407</u>	<u>₩ 1,200,598</u>
Discontinued	(93,877)	(92,029)	(1,848)	(41)	244	-
	<u>₩ 55,833,451</u>	<u>₩ 48,462,505</u>	<u>₩ 7,370,946</u>	<u>₩ 2,653,210</u>	<u>₩ 1,983,651</u>	<u>₩ 1,200,598</u>

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**26. Construction contracts (cont'd)**

	2014					
	Accumulated construction revenue	Accumulated construction cost	Accumulated construction profit (loss)	Receivables from construction contracts-billed	Receivables from construction contracts-unbilled	Dues to customers for contract work
Power generation	₩ 26,557,392	₩ 21,928,399	₩ 4,628,993	₩ 233,269	₩ 583,492	₩ 688,891
Water	3,607,768	3,281,925	325,843	12,220	243,910	4,344
Industrial plants	986,374	938,192	48,182	16,154	103,836	24,969
Castings & Forgings	294,794	301,613	(6,819)	48,244	-	-
Plant construction	1,144,332	1,145,246	(914)	3,845	19,234	5,588
General construction	<u>2,012,338</u>	<u>1,852,772</u>	<u>159,566</u>	<u>791,435</u>	<u>152,210</u>	<u>23,226</u>
	<u>34,602,998</u>	<u>29,448,147</u>	<u>5,154,851</u>	<u>1,105,167</u>	<u>1,102,682</u>	<u>747,018</u>
Subsidiaries:						
DEC	9,780,001	8,564,581	1,215,420	1,463,796	777,882	142,482
DE	188,147	147,311	40,836	-	13,000	14,568
DPS S.A and subsidiaries	<u>7,748,960</u>	<u>6,739,164</u>	<u>1,009,796</u>	<u>77,568</u>	<u>185,465</u>	<u>216,134</u>
	<u>17,717,108</u>	<u>15,451,056</u>	<u>2,266,052</u>	<u>1,541,364</u>	<u>976,347</u>	<u>373,184</u>
	<u>₩ 52,320,106</u>	<u>₩ 44,899,203</u>	<u>₩ 7,420,903</u>	<u>₩ 2,646,531</u>	<u>₩ 2,079,029</u>	<u>₩ 1,120,202</u>
Discontinued	<u>(215,308)</u>	<u>(216,415)</u>	<u>1,107</u>	<u>(313)</u>	<u>(4,323)</u>	<u>(103)</u>
	<u>₩ 52,104,798</u>	<u>₩ 44,682,788</u>	<u>₩ 7,422,010</u>	<u>₩ 2,646,218</u>	<u>₩ 2,074,706</u>	<u>₩ 1,120,099</u>

26-2. Changes in construction contracts for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	Project name	Term	2015			
			January 1	Changes in contract	Realized revenue	December 31
Power generation	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	Yanbu ph.3 MSF and others	2012.11 ~ 2016.12	858,531	263,010	435,691	685,850
Industrial plants	Cikarang GTSU 2 and STRE 2 and others	2014.04 ~ 2016.04	208,319	(41,773)	69,070	97,476
Castings & Forgings	Casting, Forging	2015.01 ~ 2015.12	566,549	414,503	367,323	613,729
Plant construction	Shinboryung #1,2 electric generation construction and others	2013.06 ~ 2017.06	577,904	488,819	138,888	927,835
General construction	Seoul Forest Trimage and others	2013.07 ~ 2017.01	1,197,920	231,420	343,187	1,086,153
			<u>13,884,026</u>	<u>5,408,828</u>	<u>5,146,294</u>	<u>14,146,560</u>
DE	Singori #3 and #4 emergency generators, alternative AC power diesel engine and other 15	2005.02 ~ 2017.03	97,502	24,460	36,754	85,208
DEC	Suseo-Pyungtaek high speed rail second construction district and others	2007. 05 ~ 2017.12	6,736,325	2,078,629	1,742,185	7,072,769
DPS S.A. and subsidiaries	Raipur and others	2008.12 ~ 2030.12	1,916,543	2,954,622	1,551,422	3,319,743
			<u>8,750,370</u>	<u>5,057,711</u>	<u>3,330,361</u>	<u>10,477,720</u>
			<u>₩ 22,634,396</u>	<u>₩ 10,466,539</u>	<u>₩ 8,476,655</u>	<u>₩ 24,624,280</u>
Discontinued			<u>(37,603)</u>	<u>36,659</u>	<u>(944)</u>	<u>-</u>
			<u>₩ 22,596,793</u>	<u>₩ 10,503,198</u>	<u>₩ 8,475,711</u>	<u>₩ 24,624,280</u>

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**26. Construction contracts (cont'd)**

		2014				
	Project name	Term	January 1,	Changes in contract	Realized revenue	December 31
Power generation	Rabigh Power Plant and others	2010.09 ~ 2017.12	₩ 9,045,337	₩ 5,251,988	₩ 3,822,522	₩ 10,474,803
Water	Yanbu ph.3 MSF and others	2012.11 ~ 2016.12	1,358,239	42,472	542,180	858,531
Industrial plants	Samcheok #1 ~ 2 CSU4 and others	2013.01 ~ 2016.06	276,516	70,780	138,977	208,319
Castings & Forgings	Plant Casting, Forging	2014.01 ~ 2014.12	537,540	449,929	420,920	566,549
Plant construction	Samcheok LNG #5 ~ 7 and others	2010.11 ~ 2015.12	698,691	64,605	185,392	577,904
General construction	Seoul Forest Trimage and others	2013.07 ~ 2017.04	1,354,196	230,526	386,802	1,197,920
			<u>13,270,519</u>	<u>6,110,300</u>	<u>5,496,793</u>	<u>13,884,026</u>
DE	Singori #3 and #4 emergency generators, alternative AC power diesel engine and other 13	2005.02 ~ 2017.03	84,587	33,641	20,726	97,502
DEC	Heaundae Jugong and others	2007.05 ~ 2017.01	7,195,003	1,733,315	2,191,993	6,736,325
DPS S.A. and subsidiaries	Raipur and others	2008.12 ~ 2030.12	2,457,071	1,307,841	1,848,369	1,916,543
			<u>9,736,661</u>	<u>3,074,797</u>	<u>4,061,088</u>	<u>8,750,370</u>
			<u>₩ 23,007,180</u>	<u>₩ 9,185,097</u>	<u>₩ 9,557,881</u>	<u>₩ 22,634,396</u>
Discontinued			<u>(61,452)</u>	<u>(7,389)</u>	<u>(31,238)</u>	<u>(37,603)</u>
			<u>₩ 22,945,728</u>	<u>₩ 9,177,708</u>	<u>₩ 9,526,643</u>	<u>₩ 22,596,793</u>

26-3. 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 (Korean won in millions):

	Changes in total contract revenue	Changes in total contract cost	Effect on profit (loss) for the year	Effect on the future	Changes in due from customers for contract work
Power generation	₩ 111,833	₩ 188,599	₩ (97,111)	₩ 20,345	₩ 13,853
Water	74,417	58,199	15,839	379	3,499
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
DE	19	(450)	464	5	-
DEC	295,315	298,982	(43,118)	39,451	7,096
	<u>₩ 577,912</u>	<u>₩ 611,507</u>	<u>₩ (88,720)</u>	<u>₩ 55,125</u>	<u>₩ 27,044</u>

Impacts on current and future net income were calculated based on total contract revenue and costs which were estimated based on the current circumstances as at December 31, 2015. Those estimations may change in the future.

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**27. Classification of expenses based on nature**

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

	2015	2014
Changes in inventories	₩ 135,418	₩ (126,116)
Purchase of raw materials and goods	7,892,897	9,148,032
Salaries	2,710,403	2,725,956
Depreciation & amortization	584,517	567,519

**28. 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	₩ 593,446	₩ 651,686
Severance and retirement benefits	274,619	103,324
Employee welfare benefits	131,912	137,313
Travel	62,336	68,037
Training	22,467	31,004
Taxes and dues	24,037	22,989
Commissions	241,926	223,431
Sales commission	60,066	59,864
Rents	71,592	75,954
Bad debt expenses	321,105	113,198
Transportation	16,682	16,735
Depreciation	28,282	38,621
Amortization	79,282	77,319
Research	281,382	277,807
Marketing	30,114	28,330
Advertising	96,237	93,412
Warranty	28,656	21,988
Others	131,450	149,166
	₩ 2,495,591	₩ 2,190,178

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**29. Finance income and costs**

29-1. Details of finance income for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Interest income	₩ 45,199	₩ 55,647
Dividend income	1,646	537
Gain on foreign currency transactions	311,182	206,995
Gain on foreign currency translation	126,334	78,703
Gain on settlement of derivative financial instruments	310,578	313,362
Gain on valuation of derivative financial instruments	141,773	92,585
Gain on valuation of firm commitments	297,431	170,310
Gain on financial guarantees	2,047	4,363
	<u>₩ 1,236,190</u>	<u>₩ 922,502</u>

29-2. Details of finance costs for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Interest expenses	₩ 629,790	₩ 639,638
Loss on foreign currency transactions	270,994	206,327
Loss on foreign currency translation	310,535	104,766
Loss on settlement of derivative financial instruments	291,928	311,962
Loss on valuation of derivative financial instruments	317,568	282,020
Loss on valuation of firm commitments	89,306	76,866
Payment of guarantee fee	42,136	112,894
Loss on redemption of debentures	350	38,140
Others	2,634	1,688
	<u>₩ 1,955,241</u>	<u>₩ 1,774,301</u>

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**30. Other non-operating income and expenses**

30-1. Details of other non-operating income for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Gain on disposal of plant, property and equipment	₩ 6,460	₩ 4,384
Gain on disposal of intangible assets	625	176
Gain on disposal of investment property	-	785
Gain on disposal of available-for-sale financial instruments	12,284	1,463
Gain on disposal of other non-current assets	29,718	-
Gain on disposal of non-current assets classified as held-for-sale	(338)	45,090
Reversal of impairment on plant, property and equipment	1,400	-
Others	45,674	75,864
	<u>₩ 95,823</u>	<u>₩ 127,762</u>

30-2. Details of other non-operating expenses for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Loss on disposal of trade receivables	₩ 13,935	₩ 23,440
Loss on disposal of plant, property and equipment	9,010	7,941
Loss on disposal of intangible assets	200	144
Other bad debt expenses	283,554	61,908
Impairment loss on plant, property and equipment	129,915	8,691
Impairment loss on intangible assets	196,904	13,103
Impairment loss on other non-current assets	11,679	-
Restructuring expenses	55,284	45,455
Impairment loss on non-current assets classified as held-for-sale	71,811	-
Donation	26,277	23,135
Others	116,473	95,453
	<u>₩ 915,042</u>	<u>₩ 279,270</u>

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**31. Income taxes**

31-1. The component of income tax expense (benefit) for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Current income tax:	₩ 90,726	₩ 131,651
Adjustments in respect of current income tax of prior year	175	302
Tax effect of temporary difference	197,182	(283,462)
Total income tax expense (benefit)	<u>288,083</u>	<u>(151,509)</u>
Current income tax related to items recognized in equity during the year	1,360	(1,361)
Deferred tax related to items recognized in equity during the year	(121,550)	52,234
Income tax benefit related to discontinued operation	-	(4,169)
Income tax expense (benefit)	<u>₩ 167,893</u>	<u>₩ (104,805)</u>

31-2. 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 loss		
on disposal of treasury stock	₩ -	₩ (9)
Equity adjustments in equity method	22	(260)
Net gain on revaluation of land	111,463	436
Unrealized gain on available for sale financial assets	4,244	407
Gain (loss) on valuation of derivative financial instruments	13,847	(2,033)
Remeasurement of the net defined benefit liability	(16,170)	(46,446)
Net loss on translation of foreign operations	(44,215)	(2,968)
Others	50,999	-
	<u>₩ 120,190</u>	<u>₩ (50,873)</u>

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**31. Income taxes (cont'd)**

31-3. Changes in deferred tax assets (liabilities) for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015		
	Jan 01	Increase (decrease)	Dec 31
Provision for retirement and severance benefits	₩ 262,606	₩ (3,715)	₩ 258,891
Allowance for doubtful accounts	398,220	82,598	480,818
Property, plant and equipment	25,569	4,875	30,444
Reserve for research and development	(137,584)	40,323	(97,261)
Intangible assets	53,446	13,745	67,191
Derivative financial instruments	57,981	(25,500)	32,481
Foreign currency denominated assets (liabilities)	1,232	15,421	16,653
Gain on revaluation of land	(682,421)	(76,823)	(759,244)
Others	882,898	(248,106)	634,792
	<u>₩ 861,947</u>	<u>₩ (197,182)</u>	<u>₩ 664,765</u>

  

	2014		
	Jan 01	Increase (decrease)	Dec 31
Provision for retirement and severance benefits	₩ 196,946	₩ 65,660	₩ 262,606
Allowance for doubtful accounts	458,115	(59,895)	398,220
Property, plant and equipment	49,614	(24,045)	25,569
Reserve for research and development	(144,279)	6,695	(137,584)
Intangible assets	40,876	12,570	53,446
Derivative financial instruments	24,575	33,406	57,981
Foreign currency denominated assets (liabilities)	1,059	173	1,232
Gain on revaluation of land	(700,125)	17,704	(682,421)
Others	651,704	231,194	882,898
	<u>₩ 578,485</u>	<u>₩ 283,462</u>	<u>₩ 861,947</u>

31-4. The amount of deductible temporary differences for which no deferred tax asset is recognized in the statements of financial position as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Deductible temporary differences	₩ 3,651,343	₩ 1,818,302

The probability of deferred tax assets being realized depends on the Group'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 Group periodically reviews such matters.

31-5. Temporary differences related to investment in subsidiaries, associates and joint ventures which are not recognized as deferred tax asset (liability) as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Investment in subsidiaries	₩ 681,368	₩ 514,445
Investment in associates or joint ventures	41,324	22,119
	<u>₩ 722,692</u>	<u>₩ 536,564</u>



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**31. Income taxes (cont'd)**

31-6. Reconciliation of loss before income tax at the Korea statutory tax rate to income tax benefit at the effective income tax rate of the company as follows (Korean won in millions):

	2015	2014
Loss before income tax	₩ (1,557,863)	₩ (205,060)
Income tax using the controlling company's statutory tax rate	(507,973)	(38,266)
Adjustments:		
Non-temporary differences	(53,366)	17,276
Unrealized deferred tax related to temporary differences	583,232	(37,176)
Tax credit	(7,195)	(49,722)
Others	153,195	3,083
Income tax benefit	₩ 167,893	₩ (104,805)
Effective tax rate(*1)	-	-

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

**32. Earnings (loss) per share**

32-1. Basic earnings loss per share amounts are calculated by dividing the profit (loss) for the year attributable to ordinary equity holders of the Group by the weighted average number of ordinary shares outstanding during the year.

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

	2015	2014
Loss for the year attributable to equity holders of the parent	₩ (1,038,543,220,644)	₩ (94,675,179,547)
Less: preferred stock dividend	12,309,000,165	12,309,000,165
Loss for the year attributable to ordinary equity holders of the parent	(1,050,852,220,809)	(106,984,179,712)
Loss from continuing operations	(1,030,685,639,610)	(119,481,753,094)
Profit (loss) from discontinued operations	(20,166,581,199)	12,497,573,382
Weighted-average number of ordinary stock outstanding	98,845,751 Shares	98,845,751 Shares
Earnings (loss) per share:		
Basic, loss for the year attributable to ordinary equity holders of the parent	(10,631)	(1,082)
Loss for the year from continuing operations	(10,427)	(1,209)
Profit (loss) for the year from discontinued operations	(204)	127

Weighted-average number of ordinary shares outstanding for the 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

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
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**32. Earnings (loss) per share (cont'd)**

32-2. 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, except for share):

	2015	2014
Loss for the year attributable to equity holders of the parent	₩ (1,050,852,220,809)	₩ (106,984,179,712)
Adjusted profit (loss) for the year	-	-
Loss for the year attributable to equity holders of the parent after adjustment	(1,050,852,220,809)	(106,984,179,712)
Loss from continuing operations	(1,030,685,639,610)	(119,481,753,094)
Profit (loss) from discontinued operations	(20,166,581,199)	12,497,573,382
Weighted average number of ordinary shares outstanding as at December 31, after adjustment	98,845,751 Shares	98,845,751 Shares
Earnings (loss) per share:		
Diluted, loss for the year attributable to ordinary equity holders of the parent	(10,631)	(1,082)
Loss for the year from continuing operations	(10,427)	(1,209)
Profit (loss) for the year from discontinued operations	(204)	127

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

	2015	2014
Weighted average number of ordinary shares outstanding as at December 31	98,845,751	98,845,751
Effect of stock options	-	-
Weighted average number of ordinary shares (diluted) outstanding as at December 31	98,845,751	98,845,751

32-3. Details of potential ordinary shares, that are potentially dilutive but were not included in the calculation of earnings (loss) per share, as there were no dilutive effects for the years ended December 31, 2015 and 2014, are as follows (number of shares):

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**32. Earnings (loss) per share (cont'd)**

	2015	2014
Stock option (Feb. 27, 2006)	2,600	2,600
Stock option (Mar. 16, 2007)	8,600	8,600
Stock option (Mar. 21, 2008)	17,400	19,000
Stock option (Mar. 27, 2009)	13,200	15,450
Stock option (Mar. 26, 2010)	29,600	34,400
Stock option (Mar. 25, 2011)	59,900	79,100
Stock option (Mar. 30, 2012)	143,200	220,400
Stock option (Mar. 29, 2013)	279,900	279,900
Stock option (Mar. 28, 2014)	342,300	394,800
Redeemable convertible preferred stocks	13,203,540	13,203,540
	<u>14,100,240</u>	<u>14,257,790</u>

**33. Commitments and contingencies**

- (i) As at December 31, 2015, 25 promissory notes in the aggregate of ₩18,887 million, 27 blank notes and 34 blank checks have been provided as collateral to relevant financial institutions and others for the Group's debt and guarantees.
- (ii) As at December 31, 2015, the Group has credit lines for borrowings, bank overdrafts and others from financial institutions for up to ₩10,821,288 million and used ₩8,625,297 million. As a result, the Group maintains unused credit lines amounting to ₩2,195,991 million.
- (iii) As at December 31, 2015, the Group is involved in pending lawsuits as a defendant with total claims against the Group amounting to approximately ₩604,980 million. The outcome of such pending lawsuits cannot presently be determined. In 2015, Hyundai Engineering & Construction Co., Ltd. requested International Chamber of Commerce to arbitrate disputes on manufacture of HRSG and warranties for general repairs with DEC. As at December 31, 2015, arbitration is in process, and the outcome of the arbitration cannot be reasonably estimated.
- (iv) As at December 31, 2015, the Group has entered into 20 technical contracts with Mitsubishi Heavy Industries, Ltd. and others. Royalty payments for the use of such technologies amounted to ₩59,496 million (2014: ₩86,333 million) for the year ended December 31, 2015.
- (v) The Group continues to recognize factored financial assets in the statement of financial position since the Group holds virtually all the risks and rewards of ownership. The Group also recognizes the associated financial liabilities amounting to ₩103,166 million as at December 31, 2015.
- (vi) As at December 31, 2015, the Group provides joint and several guarantees amounting to ₩588,272 million for the performance of construction contracts to other construction companies. In addition, the Group provides joint and several guarantees for construction performance to Korea Housing & Finance Corporation related to the guarantee for housing sales, which was provided by Korea Housing Finance Corporation to the developers.
- (vii) As at December 31, 2015, payment guarantees by financial institutions amounting to ₩11,649,132 million are provided for the Group in connection with domestic and overseas construction projects and others.

**33. Commitments and contingencies (cont'd)**

(viii) As at December 31, 2015, the Group provides payment guarantees amounting to ₩2,307,998 million to customers and purchasers of vacant lots for housing sales for the purpose of supporting reconstruction and redevelopment project unions and increasing domestic and overseas sales.

(ix) Operating lease commitments

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

	Amount	
Less than 1 year	₩	29,513
More than 1 year ~ Less than 5 years		99,029
More than 5 years		129,762
	₩	258,304

(x) 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 Group 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 Group.

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**33. Commitments and contingencies (cont'd)**

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

Type	Developer	Project name	Lender	Guarantee period	Guarantee limit	Loan balance	Warranty type
ABCP	The Company	Sangdo-dong Doosan We've (2nd)	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	<u>70,000</u>	<u>70,000</u>	Debt assumption
					<u>140,000</u>	<u>140,000</u>	
Loan	The Company	Seoul Forest Trimage Yongin	Korea Federation of Community Credit Cooperative and others	2014.04.29~ 2017.08.29	195,000	195,000	Debt assumption
		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
	DEC	Hwaseong Banwol	Nonghyup Bank and others	2008.03.31~ 2016.06.30	78,000	60,000	Joint and several guarantee
		Pohang new port Ulsan Daehyung-dong	Shinhan Bank and others	2010.03.26~ 2025.12.31	7,447	7,447	Joint and several guarantee
Short-term debt	The Company	Daejeon Riverside	Woori Bank and others	2013.07.11 ~ 2017.11.30	89,500	89,500	Joint and several guarantee
		Seoul Forest Trimage Yongin	KEB Hana Bank	2004.05.06~ 2024.05.06	<u>7,167</u>	<u>3,987</u>	Joint and several guarantee
		Administration town	LIG Securities and others	2014.04.29~ 2017.08.29	<u>500,114</u>	<u>478,934</u>	Debt assumption
		Sangdo-dong Doosan We've (2nd)	SK Securities	2014.04.18~ 2016.04.17	30,000	30,000	Debt assumption
	DEC	Hongcheon Mokok CC (Club Mow)	Kiwoom Securities and others	2015.11.26~ 2016.02.26	120,000	120,000	Debt assumption
		Ulsan Daehyung-dong	Kyobo Securities and others	2015.04.22~ 2016.04.19	30,000	30,000	Debt assumption
		Cheonan Chengdang-dong	KTB Securities	2015.10.06~ 2016.01.06	41,600	32,000	Joint and several guarantee
			Shinyoung Securities	2015.12.18~ 2016.03.18	<u>65,000</u>	<u>50,000</u>	Joint and several guarantee
				<u>321,600</u>	<u>297,000</u>		
				<u>₩ 961,714</u>	<u>₩ 915,934</u>		

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**33. Commitments and contingencies (cont'd)**

(xii) Details of consolidated structured entities as at December 31, 2015 are as follows (Korean won in millions):

Entity	Nature of interests in consolidated structured entities or provision of financial support	Liability amount of interests in consolidated structured entities	Maximum exposure to the loss of consolidated structured entities
Doosan Cuvex 1st Securitization Specialty LLC (*1)	Obligation for financial support including principle, interest, etc.	₩ 41,500	₩ 41,500
SD 1st Co.,Ltd. (*2)	Obligation for financial support including principle, interest, etc.	100,000	69,500
PINETREE CITY 1st Co.,Ltd. (*3)	Obligation for financial support including principle, interest, etc.	50,000	39,700
DS Changwon 1st LLC (*4)	Obligation for financial support including principle, interest, etc.	30,000	30,000
SD 5th Co.,Ltd. (*5)	Obligation for financial support including principle, interest, etc.	33,000	33,000
DS Public 1st Co.,Ltd. (*6)	Obligation for financial support including principle, interest, etc.	50,000	49,900
DS Public 2nd Co.,Ltd. (*7)	Obligation for financial support including principle, interest, etc.	35,000	35,000
DS-Bliss 1st Co.,Ltd. (*8)	Obligation for financial support including principle, interest, etc.	45,000	45,000
The DSWAY 1st Co.,Ltd. (*9)	Obligation for financial support including principle, interest, etc.	40,000	40,000
Doosan E&C 2nd Co.,Ltd. (*10)	Obligation for financial support including principle, interest, etc.	102,000	102,000
KDPP 1st Co.,Ltd. (*11)	Obligation for financial support including principle, interest, etc.	115,000	115,000
Happy Tomorrow 20th Co., Ltd. (*11)	Obligation for financial support including principle, interest, etc.	50,000	50,000

(\*1) Doosan Cuvex 1st Securitization Specialty LLC was established for the purpose of securitizing the shares of a subsidiary, Doosan Cuvex Co., Ltd., held by DEC. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩41,500 million as at December 31, 2015.

(\*2) SD 1st Co., Ltd. was established for the purpose of securitizing future construction receivables from nine government-ordered constructions projects including Incheon-Kimpo Highway project of DEC. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩69,500 million as at December 31, 2015.

(\*3) PINETREECITY 1st Co., Ltd. was established for the purpose of borrowing by providing DEC's Changwon 2nd plant as subordinated collateral. The company issued ABS bonds to financial institution for funding and the book value of underlying assets are amounting to ₩39,700 million based on its financial statement as at December 31, 2015. DEC has provided the certain portion of properties for obligation for financial supporting for the company.

(\*4) DS Changwon 1st LLC was established for the purpose of borrowing by providing DEC's Changwon 1st plant as subordinated collateral. The company issued ABS bonds to financial institution for funding and the book value of underlying assets are amounting to ₩30,000 million based on its financial statement as at December 31, 2015. DEC has provided the certain portion of properties for obligation for financial supporting for the company.

(\*5) SD 5th Co., Ltd. was established for the purpose of securitizing future construction receivables from two government-ordered constructions projects including Suseo pyungtaek high speed rail second construction district of DEC. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩33,000 million as at December 31, 2015.

**33. Commitments and contingencies (cont'd)**

- (\*6) DS Public 1st Co., Ltd. was established for the purpose of securitizing future construction receivables from eight government-ordered constructions projects including Wonju-Gangneung Railway Fifth construction district of DEC. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩49,900 million as at December 31, 2015.
  - (\*7) DS Public 2nd Co., Ltd. was established for the purpose of securitizing future construction receivables from nine construction project including construction of KHNP head office of DEC subsidiary company. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩35,000 million as at December 31, 2015.
  - (\*8) DS-Bliss 1st Co., Ltd. was established for the purpose of securitizing future construction receivables from seven construction projects including Wolgye fourth zone project, Chuncheon training institute. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩45,000 million as at December 31, 2015. DEC has provided the some of its properties for obligation for financial supporting for the company.
  - (\*9) The DSWAY 1st Co.,Ltd. was established for the purpose of securitizing future construction receivables from five construction projects including Doosan research complex of DEC. It receives funds from issuing ABS bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩40,000 million as at December 31, 2015.
  - (\*10) Doosan E&C 2nd Co., Ltd. was established for the purpose of borrowing by providing DEC' s Changwon 2nd plant as collateral. The company issued ABS bonds to financial institution for funding and the book value of underlying assets are amounting to ₩102,000 million based on its financial statement as at December 31, 2015. DEC has provided the some of its properties for obligation for financial supporting for the company.
  - (\*11) KDPP 1st Co., Ltd and Happy Tomorrow 20th Co., Ltd. was established for the purpose of securitizing future construction receivables belongs to parent company. It receives funds from issuing ABCP bonds to financial institutions. Based on the book value presented in its financial statements, underlying assets amounted to ₩115,000 million and ₩50,000 million each as at December 31, 2015.
- (xiii) Other commitments and contingencies
- (a) During the year ended December 31, 2011, DI issued 19th series bonds denominated in USD 350 million. In accordance with the agreement for issuing the 19th series bonds, an early redemption clause exists for when and if DI's guarantor, KDB, becomes privatized. However, under the agreement, the funds required for such redemption will be lent by KDB to DI. In addition, DI has provided its 20,429 shares of DII, acquired on November 25, 2011 as collateral to KDB.
  - (b) As at December 31, 2015, DI, a shareholder of Doosan Infracore China Co., Ltd. entered into an agreement with financial investors under which DI and the financial investors, as they mutually agree, may collectively dispose of all shares in Doosan Infracore China Co., Ltd., respectively held by each, to a third party. Upon exercise of the agreement by the financial investors, DI holds the right to sell its shares in Doosan Infracore China Co., Ltd. together pursuant to the agreement or otherwise repurchase the shares held by the financial investors.

**33. Commitments and contingencies (cont'd)**

- (c) DEC entered into construction contracts with INTDC Co., Ltd. and Daewon Plus Constructions Co., Ltd., to develop Ilsan Zenith project and Haeundae Zenith project, respectively. DEC has provided guarantees to customers, who purchase the Ilsan Zenith and Haeundae Zenith apartments, for the consideration paid to purchase the apartments during the repurchase guarantee periods (2~3 years after the date of sale), should customers apply for such guarantees (See Note 33-8). As at December 31, 2015, the Group's consolidated financial statements do not reflect the effect from such guarantees as the Group cannot reasonably predict the number of purchasers applying for the guarantee and the related guaranteed amount.
- (d) With regard to the Incheon-Kimpo Highway Construction Project, the Group entered into a capital supplement agreement with a limit of guarantee of ₩22,346 million with Incheon-Kimpo Expressway Co., Ltd. and Construction investors associated with SOC business have an agreement of providing a insufficient fund, when the agreement was terminated or insufficient to repay the loan principal and interest by buy price or payment arising from purchase requirement from authorities.
- (e) The convertible preferred shareholders of Doosan Bobcat Inc. have rights to call for selling shares of Doosan Bobcat Inc. owned by Doosan Infracore Co., Ltd. and shares of DII, DHEL and Doosan International South East Asia Pte. Ltd. owned by Doosan Bobcat Inc. if Doosan Bobcat Inc. does not go public in 4 years and 6 months. When the convertible preferred shareholders of Doosan Bobcat Inc. exercise their put options, Doosan Infracore Co., Ltd. should repurchase shares of Doosan Bobcat Inc..
- (f) As at December 31, 2015, the Company has entered into a contract to assume a liability (limit: ₩155,000 million) if it fails to complete construction of The Land Park Office in Magok district.



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**34. Assets pledged as collateral**

34-1. Assets pledged as collateral related with debt

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

Pledgor	Collateralized asset	Collateralized amount	Amount of borrowings and others	Pledgee
The Company	Short-term financial instruments	₩ 4,208	₩ -	Banca Transylvania
	Property, plant and equipment	602,499	565,216	KDB
		3,516	2,678	Korea Exim Bank
		27,907	23,414	Vietnam Bank
		466	-	Banca Transylvania
DI	Trade receivables	8,419	-	Banca Transylvania
	Property, plant and equipment (*1)	549,674	292,600	KDB
DEC	Investment property	30,912	237,054	Woori bank
	Property, plant and equipment	195,500	65,207	KEB Hana Bank
		119,500	75,535	KDB
		2,772	412	Kookmin Bank
		39,000	30,000	DS Changwon 1st Co., Ltd.
		130,050	102,000	Doosan E&C 1st Co., Ltd.
		65,000	39,700	PINETREE CITY 1st Co.,Ltd.
		80,000	45,000	DS-Bliss 1st Co.,Ltd.
		6,974	5,400	Korea Infra Asset Management Co.,Ltd.
		Trade receivables	6,974	5,400
	₩ 1,866,397	₩ 1,484,216		

(\*1) The rights to the benefits from property insurance have been pledged as collateral to KDB.

(ii) Doosan Infracore International, Inc. (DII) and Doosan Holdings Europe Ltd. (DHEL) repaid all the long-term borrowings funded in 2011 for the acquisition of the Compact Equipment business of Ingersoll-Rand and entered into a new loan agreement to borrow USD 1,700,000 thousand on May 28, 2014. DI provided 27,096 shares in DII, 21,820 shares in DHEL, and certain tangible and intangible assets of DII and DHEL, and their subsidiaries as collateral for borrowings amounting to USD 1,300,000 thousand. The balance of borrowings as at December 31, 2015 amounted to USD 1,180,500 thousand. And DE Provided Citigroup Global Market Inc. with 7,242 shares in DII and 8,154 shares in DHEL as collateral for the borrowings amounting to USD 1,300 million and DE also provided certain shares in DII and DHEL in connection with an overdraft limit agreement amounting to USD 100 million.

(iii) DI has provided 4,540 shares in DII and 4,859 shares in DHEL held by Doosan Bobcat Inc. as collateral for borrowings amounting to ₩100,000 million from Core Value 1st Co., Ltd. and 2 other companies. DI has provided all of its shares in Doosan Infracore America Corp. and Doosan Infracore Norway AS. as collateral for borrowings amounting USD175,000 thousands from Korea Exim Bank. In addition DI has provided cash and cash equivalent of ₩15,000 million in DI as collateral for borrowings amounting to BRL 20 million which DI's subsidiaries, Doosan Infracore South America Industria E Comercio De Maquinas De Construcao LTDA borrowed. Also DI has provided CNY830 million as collateral for credit line amounting to ₩132,000 million opened in Bank of China.

(iv) DEC has provided 1,200,000 shares in Doosan Cuvex Co., Ltd. as collateral in connection with an overdraft limit agreement amounting to ₩238,054 million with Woori Bank. As at December 31, 2015, the balance of related borrowings amounted to ₩237,054 million.

**34. Assets pledged as collateral (cont'd)**

(v) DEC has provided 24.76% of equity interests in Doosan Heavy Industry Vietnam Co., Ltd. and 20% of equity interests in DHI Vietnam Haipong Co., Ltd. as collateral in connection with an overdraft limit agreement amounting to ₩75,535 million with KDB. As at December 31, 2015, the balance of related borrowing amounted to ₩75,535 million.

(vi) DEC has provided a certain portion of property, plant and equipment in trust with NH Investment & Securities for the borrowings amounting to ₩30,000 million from DS Changwon the 1st Co., Ltd. As at December 31, 2015, the balance on the related trust asset amounted to ₩250,663 million.

34-2. As at December 31, 2015, assets pledged as collateral on behalf of others are summarized as follows (Korean won in millions):

Pledgor	Collateralized asset	Carrying amount	Pledgee	Beneficiary
The Company	Long-term investments in securities	₩ 23,818	Kookmin Bank and others	Inchen-Kimpo express highway Co.,Ltd. and others
	Inventories	21,440	CSOB	Abener Energia S.A
DEC	Long-term investments in securities	80,302	KDB and others	Sudokwon seobu express highway Co.,Ltd. and others
		₩ 125,560		

Some of investments in associates and joint ventures such as, Shinbundang Co., Ltd. stock and other (Book value: ₩32,659 million) have been provided as collateral for certain subsidiaries' project financing to KDB and other, lenders of the project Financing.

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**35. Related party disclosures**

35-1. The major related parties of the Group and nature of their relationship with the Group as at December 31, 2015 are as follows:

- (1) As at December 31, 2015, the Group's ultimate parent company is Doosan Corp. (equity ownership: 36.82%).
- (2) As at December 31, 2015, the details of the Group's associates and joint ventures, other related parties are as follows:

Relationship	Related party
Associates, joint ventures and others (*1)	Tamra Offshore Wind Power Co., Ltd. Dalian Samyoung Doosan Metal Product Co., Ltd. Kyunggi Railroad Co., Ltd. Shinbundang Railroad Co., Ltd. Neo Trans Co., Ltd. New Seoul Railway Corporation Haman Industrial Complex Company Doosan PSI LLC Xuzhou Xugong Doosan Engine Co., Ltd. and others
Other related parties: Subsidiaries of controlling company	Doosan Tower Co., Ltd. Oricom Inc. Doosan DST Co.Ltd. Doosan Bears Inc. Doosan Advertising (Beijing) Co., Ltd. Doosan Feed & Livestock Co., Ltd. DIP Holdings Co., Ltd. Doosan Electro-Materials Singapore Pte Ltd. Doosan Hongkong Ltd. Doosan Electro-Materials(Shen Zhen) Limited Doosan Shanghai Chemical Limited Doosan Electro-Materials (Changshu) Co., Ltd. Doosan Real Estate Securitization Specialty Ltd. Doosan Second Real Estate Securitization Specialty Ltd. Doosan Information and Communications America, LLC Doosan Information and Communications China Co., Ltd. Doosan Mottrol (Jiangyin) Co., Ltd. Doosan Information and Communications Europe Ltd. Doosan Electro-Materials America, LLC Doosan Industrial Vehicle Europe N.A. Doosan Industrial Vehicle U.K. Ltd. Doosan Logistics Europe GmbH Doosan Industrial Vehicle America Corp. Doosan Industrial Vehicle Yantai Co., Ltd. Doosan Electro-Materials Luxembourg Sarl Doosan Fuel Cell America, Inc. Circuit Foil Luxembourg Sarl and others
Associates and joint ventures of controlling company (*2)	Guang Dong Xingpu Steel Center
Others	Doosan EcoBizNet Co., Ltd. Presto Lite Asia Co., Ltd. Sichuan Kelun-Doosan Biotechnology Company Limited Doosan Power Systems Pension Scheme Doosan Credit Union Yonkang Foundation

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**35. Related party disclosures (cont'd)**

Relationship	Related party
Others	Chung-Ang University Dongdaemun Future Foundation Neoplux Co., Ltd.

(\*1) Doosan do BPL and Doosan Capital Co., Ltd. was excluded resulting from liquidation and disposal, respectively, and the nature of relationship with Doosan (China) Financial Leasing Corp was changed from an associate to a subsidiary.

(\*2) MVP Venture Capital 13rd was liquidated during the current year.

35-2. Significant transactions with related parties for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015					
	Sales and others			Purchases and others		
	Sales	Disposal of property, equipment and intangible assets	Other revenue	Purchases	Acquisition of property, equipment and intangible assets	Other expenses
Parent:						
Doosan Corp.	₩ 45,369	₩ 16,566	₩ 1,267	₩ 112,783	₩ 135,947	₩ 150,043
Associates and joint ventures:						
Kyunggi Railroad Co., Ltd.	81,243	-	-	1	-	-
Tamra Offshore Wind Power Co., Ltd.	63,443	-	-	2	-	-
Others	174	-	3,116	960	-	61
	<u>144,860</u>	<u>-</u>	<u>3,116</u>	<u>963</u>	<u>-</u>	<u>61</u>
Other related parties:						
Doosan Tower Co., Ltd.	36,303	-	-	701	-	9,984
Oricom Inc.	1,336	487	24	284	-	18,230
Doosan DST Co., Ltd.	5,681	-	55	-	-	-
Doosan Bears Inc.	-	-	-	4	-	18,607
Doosan Information and Communications America LLC	-	-	69	-	-	33,588
Doosan Information and communications China Co., Ltd.	-	-	-	-	-	9,095
Doosan Information and Communications Europe Ltd.	-	-	-	-	-	28,179
Chung-Ang University	45,841	-	-	1,121	40	14,130
Others	1,363	-	271	370	-	1,293
	<u>90,524</u>	<u>487</u>	<u>419</u>	<u>2,480</u>	<u>40</u>	<u>133,106</u>
	<u>₩ 280,753</u>	<u>₩ 17,053</u>	<u>₩ 4,802</u>	<u>₩ 116,226</u>	<u>₩ 135,987</u>	<u>₩ 283,210</u>

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**35. Related party disclosures (cont'd)**

	2014					
	Sales and others			Purchases and others		
	Sales	Disposal of property, equipment and intangible assets	Other revenue	Purchases	Acquisition of property, equipments and intangible assets	Other expenses
Parent:						
Doosan Corp.	₩ 46,032	₩ 1,640	₩ 1,334	₩ 160,516	₩ 16,333	₩ 160,605
Associates and joint ventures:						
Doosan (China) Financial Leasing Corp.	-	-	4,382	-	-	-
Kyunggi Railroad Co., Ltd.	94,004	-	-	19	-	-
Others	252	-	3	559	-	-
	<u>94,256</u>	<u>-</u>	<u>4,385</u>	<u>578</u>	<u>-</u>	<u>-</u>
Other related parties:						
Doosan Tower Co., Ltd.	40,103	-	1	761	-	10,409
Oricom Inc.	1,090	123	19	790	-	16,866
Doosan DST Co., Ltd.	6,722	-	97	-	-	-
Doosan Bears Inc.	23,161	-	-	-	-	17,515
Chung-Ang University	32,285	-	-	993	-	13,547
Doosan Advertising (Beijing) Co., Ltd.	-	-	-	-	-	3,916
Doosan Information and Communications America LLC	-	-	-	-	-	35,077
Doosan Information and Communications China Co., Ltd.	-	-	-	-	-	9,446
Doosan Information and Communications Europe Ltd.	-	-	-	-	-	10,780
Others	1,726	-	824	1,913	-	4,092
	<u>105,087</u>	<u>123</u>	<u>941</u>	<u>4,457</u>	<u>-</u>	<u>121,648</u>
	<u>₩ 245,375</u>	<u>₩ 1,763</u>	<u>₩ 6,660</u>	<u>₩ 165,551</u>	<u>₩ 16,333</u>	<u>₩ 282,253</u>

**Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries**  
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**35. Related party disclosures (cont'd)**

35-3. The outstanding receivables and payables arising from the transactions with related parties as at December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015				
	Receivables			Payables	
	Accounts receivable	Other receivables	Loans receivable	Accounts payable	Other payables
Parent:					
Doosan Corp.	₩ 4,498	₩ 3,017	₩ -	₩ 23,055	₩ 121,518
Associates and joint ventures:					
Kyunggi Railroad Co., Ltd.	101	269	26,000	1	-
Shinbundang Railroad Co., Ltd.	11,023	-	15,858	10	-
Tamra Offshore Wind Power Co., Ltd.	63,126	-	-	-	12,795
Haman Industrial Complex Company	5,523	5,929	-	-	-
Others	75	-	560	133	79
	<u>79,848</u>	<u>6,198</u>	<u>42,418</u>	<u>144</u>	<u>12,874</u>
Other related parties:					
Doosan Tower Co., Ltd.	31,640	5,206	-	14	613
Oricom Inc.	784	232	-	9,337	4,859
Doosan Information and Communicatio Europe Ltd.	-	-	-	-	8,175
Others	1,120	2,383	-	72	3,462
	<u>33,544</u>	<u>7,821</u>	<u>-</u>	<u>9,423</u>	<u>17,109</u>
	<u>₩ 117,890</u>	<u>₩ 17,036</u>	<u>₩ 42,418</u>	<u>₩ 32,622</u>	<u>₩ 151,501</u>

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**35. Related party disclosures (cont'd)**

	2014				
	Receivables			Payables	
	Accounts receivable	Other receivables	Loans receivable	Accounts payable	Other payables
Parent:					
Doosan Corp.	₩ 9,741	₩ 1,614	₩ -	₩ 31,072	₩ 50,393
Associates and joint ventures:					
Kyunggi Railroad Co., Ltd.	1,550	9	12,300	6	-
Shinbundang Railroad Co., Ltd.	11,023	-	9,858	-	-
Haman Industrial Complex Company	11,823	5,921	-	-	-
Others	-	395	1,750	104	225
	<u>24,396</u>	<u>6,325</u>	<u>23,908</u>	<u>110</u>	<u>225</u>
Other related parties:					
Doosan Tower Co., Ltd.	-	7,507	-	16	416
Oricom Inc.	925	10	-	5,974	6,017
Others	2,563	572	-	192	7,441
	<u>3,488</u>	<u>8,089</u>	<u>-</u>	<u>6,182</u>	<u>13,874</u>
	<u>₩ 37,625</u>	<u>₩ 16,028</u>	<u>₩ 23,908</u>	<u>₩ 37,364</u>	<u>₩ 64,492</u>

35-4. 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		Borrowings		Investments		Dividends	
	Increase	Decrease	Increase	Decrease	Capital increase	Investment	Income	Distribution
Parent:								
Doosan Corp.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 32,959
Associates and joint ventures:								
Doosan PSI LLC	-	-	-	-	-	1,108	-	-
Doosan (China) Financial Leasing Corp.	105,926	-	-	-	-	-	-	-
Kyunggi Railroad Co., Ltd.	13,700	-	-	-	-	-	-	-
New Seoul Railway Corporation	206	-	-	-	-	-	-	-
Shinbundang Railroad Co., Ltd.	6,000	-	-	-	-	-	-	-
	<u>125,832</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,108</u>	<u>-</u>	<u>-</u>
Other related parties:								
Doosan Power Systems Pension Scheme	-	-	-	-	25,000	-	-	-
	<u>₩ 125,832</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 25,000</u>	<u>₩ 1,108</u>	<u>₩ -</u>	<u>₩ 32,959</u>

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**35. Related party disclosures (cont'd)**

	2014									
	Loans		Borrowings		Investments		Dividends			
	Increase	Decrease	Increase	Decrease	Capital increase	Investment	Income	Payment		
Parent:										
Doosan Corp.	₩	-	₩	-	₩	-	₩	-	₩	32,959
Associates and joint ventures:										
Doosan (China) Financial Leasing Corp.		1,396		-		-		-		-
Doosan do BPL		-		261		-		-		-
Kyunggi Railroad Co., Ltd.		12,300		-		-		18		-
New Seou Railway Corporation		354		-		-		250		-
Shinbundang Railroad Co., Ltd.		9,858		-		-		-		-
Hanjung Power Ltd.		-		-		-		-		1,494
		<u>23,908</u>		<u>261</u>		<u>-</u>		<u>268</u>		<u>1,494</u>
	₩	<u>23,908</u>	₩	<u>261</u>	₩	<u>-</u>	₩	<u>268</u>	₩	<u>1,494</u>
									₩	<u>32,959</u>

35-5. The Group provides payment guarantees and collateral to certain related parties as at December 31, 2015 (See Notes 33 and 34).

35-6. Key management personnel are standing directors who have authorities and responsibilities for planning, operation and control of the business of the Group. 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	₩	86,059	₩	98,636
Severance and retirement benefits		9,715		8,009
Share-based payment		1,493		5,016
	₩	<u>97,267</u>	₩	<u>111,661</u>



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**36. Supplementary cash flow information**

36-1. Details of non-cash and working capital adjustments to reconcile profit for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
	₩	₩
Loss for the period	(1,750,899)	(85,475)
Adjustments:		
Interest expenses	630,155	640,218
Loss on foreign currency translation	311,102	104,802
Bad debt expenses	321,752	112,727
Other bad debt expenses	284,535	61,996
Loss on valuation of inventory	28,607	24,323
Impairment loss on available-for-sale financial assets	708	7,285
Loss on valuation of derivative financial instruments	318,405	282,149
Loss on valuation of firm commitments	89,306	76,866
Loss on equity method investments	81,659	79,859
Depreciation	371,355	387,654
Amortization	214,125	182,877
Loss on disposal of property, plant and equipment	9,301	8,094
Loss on disposal of trade receivables	13,935	23,440
Impairment loss on property, plant and equipment	129,915	8,691
Impairment loss on intangible assets	196,904	13,103
Impairment loss on non-current assets classified as held-for-sale	71,811	-
Severance and retirement benefit	148,379	192,550
Share-based payments	985	2,681
Provision for construction warranties	28,230	21,637
Financial guarantee expenses	21,807	102,961
Loss on redemption of debentures	350	38,140
Income tax expense (benefit)	167,893	(100,636)
Interest income	(45,199)	(55,685)
Dividend income	(1,646)	(537)
Gain on foreign currency translation	(126,522)	(78,723)
Gain on valuation of derivative financial instruments	(142,608)	(92,725)
Gain on valuation of firm commitments	(297,431)	(170,310)
Gain on disposal of property, plant and equipment	(6,522)	(4,418)
Gain on disposal of intangible assets	(625)	(176)
Loss (gain) on disposal of non-current assets classified as held-for-sale	338	(45,090)
Gain on disposal of other non-current assets	(29,718)	-
Others	5,522	6,749
	<u>2,796,808</u>	<u>1,830,502</u>
Working capital adjustments:		
Trade receivables	₩ (41,587)	₩ 123,433
Due from customers for contract work	10,505	283,675
Other receivables	(10,674)	(41,575)
Derivative financial instruments	(79,397)	95,399
Firm commitment instruments	106,759	(148,924)
Inventories	(140,137)	(184,942)
Other current assets	40,187	(111,001)
Other non-current assets	18,335	(1,790)
Trade payables	(411,979)	450,391
Due to customers for contract work	85,848	(554,249)
Other payables	235,907	34,730
Reserve for construction warranties	41,707	(65,355)
Reserve for other warranties	882	(1,015)
Other current liabilities	(74,465)	(4,066)

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**36. Supplementary cash flow information (cont'd)**

	2015	2014
Other non-current liabilities	(7,498)	(15,972)
Severance payments paid	(258,239)	(136,660)
Plan assets	2,748	(74,900)
Others	1,130	6,908
	(479,968)	(345,913)
Cash generated from operating activities	₩ 565,941	₩ 1,399,114

36-2. Significant transactions not involving cash flows for the years ended December 31, 2015 and 2014 are as follows (Korean won in millions):

	2015	2014
Acquisition of property, plant and equipment	₩ 60,216	₩ 4,593
Transfer from property, plant and equipment to another account	74,964	-
Transfer from Investment property to another account	37,629	105
Transfer from construction-in-progress to another account	225,321	206,765
Reclassification between short-term and long-term financial instruments	50,417	-
Reclassification between short-term and long-term loans	306,392	938
Transfer to current portion of debentures and borrowings	1,188,084	1,504,306
Transfer to current portion of asset-backed loan	42,850	18,650

**37. Non-current assets classified as held-for-sale**

As at December 31, 2015 the non-current assets classified as held-for-sales are as follows (Korean won in millions):

	Amount	Address
Land (*1)	₩ 75,870	161, Jeongja-dong Bundang-gu, Seongnam-Si, Gyunggido, Korea and others.
Investment property (*1)	21,000	
Buildings and structures	12,101	
Machinery and equipment	10,249	
	₩ 119,220	

(\*1) Some of the non-current assets classified as held-for-sale are pledged as collateral for the borrowings of the Group.

The Group measured the fair value of the assets held for sales, based on the market approach reflecting the recent sales price of an asset similar to an asset on a third party's letter of intent. The difference of ₩71,811 million between the fair value and book value of assets held for distribution was recognized as an impairment loss.

**37. Non-current assets classified as held-for-sale (cont'd)**

The valuation method, and significant and unobservable input variables used in valuation of non-current assets classified as held-for-sale are as follows:

Valuation method	Significant, unobservable input variable	Impact of unobservable input variable on fair value measurement
Trading example comparison method: Property, plant and equipment were valued by identifying the same or similar transactions and making adjustments and comparing geographical locations and individual factors. Machinery was valued by considering characteristics of machinery and market trend. If a similar transaction was not available, consumer group and useful life were considered in estimating resale value.	Adjustment of viewpoint (rate of change in price of the land and price trend)	If rate of change in price of the land and price trend goes up (down), fair value goes down (up)
	Individual factors (condition and characteristic of a lot)	If correction value of condition and characteristic of a lot goes up(down), fair value goes down (up)
	Other factors (price of land and consumer layer, etc)	If correction value of price of land and consumer layer goes up (down), fair value goes up (down)

**38. Discontinued operations**

38-1. General

DEC, a subsidiary, disposed of the plant in Incheon and 4 other plants under the Rexcon business unit during the current year and classified the unit as a discontinued operation. The unit used to engage in production and distribution of ready-mixed concrete under the Construction division. DEC has also decided to discontinue its OSS (Offshore Structure and Subsea) business under its Mecatec division. The OSS unit used to engage in manufacturing of offshore and subsea structures and equipment. Due to the discontinued operations under DEC, the consolidated financial statement of income for the year ended December 31, 2014, presented for comparative purposes, was restated.

38-2. The major classes of assets and liabilities of DEC's Rexcon business unit classified as a discontinued operation as at December 31, 2015 are as follows (Korean won in millions):

	Amount	
<Asset>		
Trade receivables	₩	14,783
Property, plant and equipment		138,233
Other assets		1,103
		154,119
<Liabilities>		
Trade payables		6,258
Other payables		3,055
		9,313
Net asset	₩	144,806

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**38. Discontinued operations (cont'd)**

38-3. The results of DEC discontinued operations for the years ended December 31, 2015 and 2014 are presented below (Korean won in millions):

	2015		
	OSS	Rexcon	Total
Sales (*1)	₩ 976	₩ 56,228	₩ 57,204
Cost of goods (*1)	3,249	53,175	56,424
Gross profit (loss)	(2,273)	3,053	780
Selling and administrative cost	1,489	3,480	4,969
Operating loss	(3,762)	(427)	(4,189)
Finance income (costs)	(783)	(15)	(798)
Other non-operating income (expense)	(1,961)	(5,899)	(7,860)
Loss before tax from discontinued operations	(6,506)	(6,341)	(12,847)
Loss on disposal of discontinued operations	-	12,296	12,296
Loss for the year from discontinued operations	₩ (6,506)	₩ (18,637)	₩ (25,143)

(\*1) Sales and cost of goods include inter-segment transactions.

	2014		
	OSS	Rexcon	Total
Sales (*1)	₩ 34,581	₩ 136,456	₩ 171,037
Cost of goods (*2)	32,407	124,578	156,985
Gross profit (loss)	2,174	11,878	14,052
Selling and administrative cost	1,963	1,958	3,921
Operating profit	211	9,920	10,131
Finance income (costs)	(288)	(266)	(554)
Other non-operating income (expense)	(1,360)	10,732	9,372
Profit (loss) before tax from discontinued operations	(1,437)	20,386	18,949
Loss on disposals of discontinued operations	-	-	-
Income tax expenses (income) related to discontinued operating	(316)	4,485	4,169
Profit (loss) for the year from discontinued operations	₩ (1,121)	₩ 15,901	₩ 14,780

(\*1) Sales and cost of goods include internal transactions

38-4. The net cash flows incurred by DEC discontinued operations are as follows (Korean won in millions):

	2015		
	OSS	Rexcon	Total
Net cash flows used in operating activities	₩ (7,862)	₩ (24,400)	₩ (32,262)
Net cash flow provided by investing activities	3	127,997	128,000
Net cash flows provided by (used in) financing activities (*1)	5,699	(103,597)	(97,898)
Net foreign exchange difference	139	-	139
Net cash flow	₩ (2,021)	₩ -	₩ (2,021)

(\*1) Borrowings and repayment arising from inter-segment treasury transactions.

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**38. Discontinued operations (cont'd)**

	2014		
	OSS	Rexcon	Total
Net cash flows used in operating activities	₩ (7,908)	₩ (334)	₩ (8,242)
Net cash flow provided by (used in) investing activities	713	(19,659)	(18,946)
Net cash flows provided by financing activities (*1)	7,308	19,972	27,280
Net foreign exchange difference	20	-	20
Net cash flow	₩ 133	₩ (21)	₩ 112

(\*1) Borrowings and repayment arising from inter-segment treasury transactions.

**39. Business combinations**

Business combinations occurred in 2015 is as follows (CNY in thousands):

Subsidiary	Operating activity	Effective date	Acquisition interest	Purchase consideration
Doosan China Financial Leasing Corp.	Finance	July 17, 2015	100%	CNY 901,961

Doosan China Financial Leasing Corp. was acquired by Doosan Infracore (China) Investment Co., Ltd., a subsidiary, and Doosan Infracore China Co., Ltd., a subsidiary, to develop competitive financial instruments that will support the Group's business activities in the Chinese market and manage systematically control risks associated with business activities.

Purchase consideration arising from the business combinations are as follows (CNY in thousands):

	Amount
Cash and cash equivalent	CNY 460,000
Consideration paid to existing shareholders, at fair value	441,961
	CNY 901,961

Fair value of the identifiable assets and liabilities arising from the business combinations are as follows (Korean won in millions):

	Amount
Fair value of identifiable assets:	
Current assets	₩ 574,766
Non-current assets	122,065
	696,831
Fair value of identifiable liabilities:	
Current liabilities	47,488
Non-current liabilities	483,450
	530,938
Fair value of identifiable net assets	₩ 165,893

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**39. Business combinations (cont'd)**

Net cash flows arising from the business combinations are as follows (Korean won in millions):

	Amount	
Cash paid	₩	83,301
Less: Cash and cash equivalents prior to the business combination		(28,361)
	₩	<u>54,940</u>

**40. Events after the reporting period**

DI, a subsidiary, approved to sell its Machine Tools business segment accompanying management right at the Board of Directors' meeting on March 2, 2016. From the sale of the business segment, Doosan Infracore Co., Ltd. expects to establish appropriate decision making procedures of each business segment, improve competitiveness, and increase revenue and profits by allocating management resources efficiently. Doosan Infracore Co., Ltd. entered into a sales contract on March 2, 2016, and expects that the business transfer will be completed until April 2016.

DEC, a subsidiary decided to reduce its capital as a result of changing the par value of share to utilize assets more efficiently and increase shareholders' value in accordance with a resolution of the Board of Directors on March 2, 2016. The amount of capital to be reduced can be changed according to a resolution of the shareholder's meeting or the number of shares converted from convertible bond in 2016.

	Par value		Capital		Number of issued stocks		Effective date of capital reduction
	Before	After	Before	After	Before	After	
<b>Capital to reduce</b>							
ordinary stock and class stock of DEC, a subsidiary	₩ 5,000	₩ 500	₩ 420,689 Million	₩ 51,069 Million	59,385,470 Shares	59,385,470 Shares	Apr.26, 2016

**41. Approval of the financial statements**

The consolidated financial statements of the Group 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 at the annual shareholders' meeting on March 25, 2016.