

POSCO DAEWOO Corporation
(formerly, Daewoo International Corporation)
and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2015 and 2016
with the independent auditors' report

POSCO DAEWOO Corporation

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Independent auditors' report

The Shareholders and Board of Directors POSCO DAEWOO Corporation (formerly, Daewoo International Corporation)

We have audited the accompanying consolidated financial statements of POSCO DAEWOO Corporation (the "Company", formerly known as Daewoo International Corporation) and its subsidiaries (collectively, the "Group"), which comprise the consolidated statements of financial position as at December 31, 2016 and 2015, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, all expressed in Korean won, 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 audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the consolidated financial statements referred to above, expressed in Korean won, present fairly, in all material respects, the financial position of the Group as at December 31, 2015 and 2016, and its financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

We have also reviewed the translation of the 2016 consolidated financial statements mentioned above into United States dollar amounts on the basis described in Note 2 to the accompanying consolidated financial statements. In our opinion, such statements have been properly translated on such basis.



March 3, 2017

This audit report is effective as of March 3, 2017, 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 audit report is used. Such events and circumstances could significantly affect the accompanying financial statements and may result in modifications to this report.

**POSCO DAEWOO Corporation
(formerly, Daewoo International Corporation)
and its subsidiaries**

Consolidated financial statements
for the years ended December 31, 2015 and 2016

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

Kim, Young-Sang
Chief Executive Officer
POSCO DAEWOO Corporation

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of financial position
as at December 31, 2015 and 2016

	Notes	Korean won in millions		U.S dollar in thousands (Note 2)
		2015	2016	2016
Assets				
Current assets				
Cash and cash equivalents	4,29,30	₩ 224,658	₩ 173,709	\$ 143,739
Trade and other receivables	5,29,30	3,156,257	3,483,692	2,882,658
Other current financial assets	6,29,30	23,629	32,534	26,921
Derivative financial assets	18,29,30	68,874	41,067	33,982
Current tax asset		2,702	5,721	4,736
Other current assets	7	99,666	177,675	147,021
Inventories	8	770,544	766,575	634,319
		<u>4,346,330</u>	<u>4,680,973</u>	<u>3,873,376</u>
Non-current assets				
Trade and other receivables	5,29,30	494,036	407,474	337,173
Other non-current financial assets	6,29,30	105,606	108,692	89,940
Investments in associates	9	435,058	446,992	369,873
Property, plant and equipment	10	625,613	666,087	551,168
Intangible assets	11	1,744,627	1,662,856	1,375,967
Investment properties	12	163,912	161,004	133,226
Other non-current assets	7	577	7	6
Deferred tax assets	27	124,749	151,551	125,405
Current tax assets		2,795	3,146	2,604
		<u>3,696,973</u>	<u>3,607,809</u>	<u>2,985,362</u>
Total assets		<u>₩ 8,043,303</u>	<u>₩ 8,288,782</u>	<u>\$ 6,858,738</u>
Liabilities				
Current liabilities				
Trade and other payables	13,29,30	₩ 1,252,100	₩ 1,808,416	\$ 1,496,414
Borrowings	14,29,30	2,097,122	1,879,023	1,554,839
Current portion of bonds	14,29,30	349,799	294,733	243,883
Derivative financial liabilities	18,29,30	72,560	71,803	59,417
Other current liabilities	15	94,885	203,653	168,517
Current tax liabilities		51,941	47,056	38,938
		<u>3,918,407</u>	<u>4,304,684</u>	<u>3,562,008</u>
Non-current liabilities				
Trade and other payables	13,29,30	32,465	28,313	23,428
Borrowings	14,29,30	696,411	592,244	490,065
Bonds	14,29,30	894,963	759,477	628,446
Other non-current liabilities	15	584	1,635	1,353
Severance benefit liabilities	16	16,267	6,012	4,975
Provisions	17	59,903	88,458	73,197
Deferred tax liabilities	27	3,114	4,307	3,564
		<u>1,703,707</u>	<u>1,480,446</u>	<u>1,225,028</u>
Total liabilities		<u>5,622,114</u>	<u>5,785,130</u>	<u>4,787,036</u>

(Continued)

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of financial position
as at December 31, 2015 and 2016 (cont'd)

	Notes	Korean won in millions		U.S dollar in thousands (Note 2)
		2015	2016	2016
Equity				
Equity attributable to owners of the parent				
Issued capital	19	₩ 569,381	₩ 569,381	\$ 471,147
Capital surplus	19	333,161	333,161	275,681
Capital adjustments		(664)	-	-
Accumulated other comprehensive income	6,20	67,848	88,463	73,201
Retained earnings	21	1,472,017	1,524,830	1,261,754
		2,441,743	2,515,835	2,081,783
Non-controlling interests		(20,554)	(12,183)	(10,081)
Total equity		2,421,189	2,503,652	2,071,702
Total liabilities and equity		₩ 8,043,303	₩ 8,288,782	\$ 6,858,738

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

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2015 and 2016

	Notes	Korean won in millions		U.S dollar in thousands
		2015	2016	(Note 2) 2016
Sales	3	₩ 17,526,906	₩ 16,492,090	\$ 13,646,744
Cost of sales	22	(16,237,950)	(15,356,215)	(12,706,839)
Gross profit		1,288,956	1,135,875	939,905
Selling and administrative expenses	22,23	(920,152)	(817,736)	(676,654)
Operating profit		368,804	318,139	263,251
Share of profit in associates	9	77,466	60,214	49,826
Share of loss in associates	9	(130,561)	(22,282)	(18,437)
Finance income	24	1,313,855	1,084,379	897,293
Finance costs	24	(1,397,450)	(1,121,308)	(927,851)
Other income	25	28,911	21,030	17,402
Other expenses	25	(127,484)	(165,538)	(136,978)
Profit for the year before tax		133,541	174,634	144,506
Income tax expense	27	(24,963)	(52,421)	(43,377)
Profit for the year	3	₩ 108,578	₩ 122,213	\$ 101,129
Other comprehensive income for the year				
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>	20			
Net loss on valuation of available-for-sale financial assets		(2,096)	(1,293)	(1,070)
Equity adjustments in equity method investments		(18,802)	5,116	4,233
Exchange differences on translation of foreign operations		14,635	14,744	12,201
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>				
Re-measurement gain (loss) on defined benefit liabilities	16	207	(1,502)	(1,243)
Other comprehensive loss for the year, net of tax		(6,056)	17,065	14,121
Total comprehensive income for the year, net of		₩ 102,522	₩ 139,278	\$ 115,250
Profit for the year attributable to:				
Owners of the parent		₩ 128,940	₩ 111,254	\$ 92,061
Non-controlling interests		(20,362)	10,959	9,068
		₩ 108,578	₩ 122,213	\$ 101,129
Total comprehensive income attributable to:				
Owners of the parent		₩ 120,200	₩ 130,367	\$ 107,875
Non-controlling interests		(17,678)	8,911	7,374
		₩ 102,522	₩ 139,278	\$ 115,249
Earnings per share for continuing operation				
(Korean won and U.S. dollar):				
Basic, profit for the year attributable to ordinary equity holders of the parent	28	₩ 1,132	₩ 977	\$ 0.81
Diluted, profit for the year attributable to ordinary holders of the parent	28	₩ 1,132	₩ 977	\$ 0.81

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

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2015 and 2016

	Korean won in millions								U.S dollar in
	Equity attributable to owners of the parent								thousands
	Issued Capital	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Subtotal	Non-controlling interest	Total	Total
As at January 1, 2015	₩ 569,381	₩ 333,161	₩ (664)	₩ 76,795	₩ 1,399,807	₩ 2,378,480	₩ (3,750)	₩ 2,374,730	\$ 1,965,023
Profit for the year	-	-	-	-	128,940	128,940	(20,362)	108,578	89,845
Net loss on valuation of available-for-sale financial assets	-	-	-	(2,096)	-	(2,096)	-	(2,096)	(1,734)
Equity adjustments in equity method investments	-	-	-	(18,802)	-	(18,802)	-	(18,802)	(15,558)
Exchange differences on translation of foreign operations	-	-	-	11,951	-	11,951	2,684	14,635	12,109
Re-measurement loss on defined benefit liabilities	-	-	-	-	207	207	-	207	171
Total comprehensive income	-	-	-	(8,947)	129,147	120,200	(17,678)	102,522	84,833
Dividends	-	-	-	-	(56,938)	(56,938)	-	(56,938)	(47,115)
Paid-in capital increase of subsidiary	-	-	-	-	-	-	874	874	724
As at December 31, 2015	₩ 569,381	₩ 333,161	₩ (664)	₩ 67,848	₩ 1,472,016	₩ 2,441,742	₩ (20,554)	₩ 2,421,188	\$ 2,003,465
As at January 1, 2016	₩ 569,381	₩ 333,161	₩ (664)	₩ 67,848	₩ 1,472,016	₩ 2,441,742	₩ (20,554)	₩ 2,421,188	\$ 2,003,465
Profit for the year	-	-	-	-	111,254	111,254	10,959	122,213	101,129
Net loss on valuation of available-for-sale financial assets	-	-	-	(1,293)	-	(1,293)	-	(1,293)	(1,070)
Equity adjustments in equity method investments	-	-	-	5,116	-	5,116	-	5,116	4,233
Exchange differences on translation of foreign operations	-	-	-	16,792	-	16,792	(2,048)	14,744	12,201
Re-measurement loss on defined benefit liabilities	-	-	-	-	(1,502)	(1,502)	-	(1,502)	(1,243)
Total comprehensive income	-	-	-	20,615	109,752	130,367	8,911	139,278	115,250
Dividends	-	-	-	-	(56,938)	(56,938)	-	(56,938)	(47,115)
Paid-in capital increase of subsidiary	-	-	-	-	-	-	919	919	760
Disposal of subsidiaries	-	-	664	-	-	664	(1,459)	(795)	(658)
As at December 31, 2016	₩ 569,381	₩ 333,161	₩ -	₩ 88,463	₩ 1,524,830	₩ 2,515,835	₩ (12,183)	₩ 2,503,652	\$ 2,071,702

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

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2016

	Korean won in millions		U.S dollar in thousands
	2015	2016	(Note 2) 2016
Operating activities			
Profit for the year	₩ 108,578	₩ 122,213	\$ 101,129
Non-cash adjustments to reconcile profit for the year			
Depreciation of property, plant and equipment	39,285	30,752	25,446
Depreciation of investment properties	2,908	2,908	2,406
Amortization of intangible assets	129,249	132,734	109,834
Severance and retirement benefits	12,733	14,944	12,366
Bad debt expenses	38,032	31,793	26,308
Interest expenses	58,628	49,524	40,980
Loss on impairment of tangible assets	-	26,794	22,171
Loss on impairment of intangible assets	18,193	21,855	18,084
Loss on impairment of available-for-sale financial assets	498	182	151
Loss on disposal of available-for-sale financial assets	-	530	439
Loss on disposal of associates	-	218	180
Loss on disposal of subsidiaries	-	13,637	11,284
Share of loss in associates	130,560	22,282	18,438
Loss on disposal of property, plant and equipment	244	181	150
Loss on disposal of intangible assets	309	-	-
Loss on foreign currency translation	249,527	152,934	126,549
Loss on settlement of derivatives	251,672	267,606	221,436
Loss on valuation of derivatives	179,476	59,039	48,853
Other bad debt expenses	55,689	28,344	23,454
Income tax expense	24,963	52,421	43,377
Loss on valuation of inventories	8,344	1,298	1,074
Financial guarantee expense	17,960	9,061	7,498
Contribution to provision for contingencies	18,401	32,592	26,969
Contribution to provision for restoration	136	440	364
Interest income	(48,247)	(35,074)	(29,023)
Share of profit in associates	(77,465)	(60,212)	(49,824)
Gain on disposal of available-for-sale financial assets	-	(13)	(11)
Gain on disposal of associates	-	(890)	(736)
Gain on disposal of subsidiaries	(308)	-	-
Dividends income	(608)	(446)	(369)
Gain on foreign currency translation	(241,978)	(134,646)	(111,416)
Gain on settlement of derivatives	(309,481)	(252,906)	(209,273)
Gain on valuation of derivatives	(115,194)	(71,915)	(59,508)
Reversal of allowance for doubtful accounts	(197)	(482)	(399)
Gain on disposal of property, plant and equipment	(352)	(538)	(445)
Gain on disposal of intangible assets	(28)	(83)	(69)
Reversal of provision for contingencies	(4,058)	-	-
Reversal of loss on valuation of inventories	-	(2,734)	(2,262)
Financial guarantee income	(753)	(299)	(247)
Reversal of loss on impairment of disposal groups classified as held for sale	(136)	-	-
Gain on disposal of disposal groups classified as held for sale	(592)	-	-

(Continued)

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2016 (cont'd)

	Korean won in millions		U.S dollar in thousands (Note 2)
	2015	2016	2016
Working capital adjustments:			
Trade receivables	₩ 927,090	₩ (241,030)	\$ (199,446)
Other current receivables	17,800	(29,725)	(24,597)
Other current assets	12,197	(81,052)	(67,068)
Inventories	258,167	5,695	4,712
Derivative financial assets	9,512	25,226	20,874
Other non-current receivables	(11,858)	-	-
Trade payables	(408,990)	564,018	466,709
Other current payables	(487)	(40,100)	(33,182)
Other current liabilities	(6,163)	120,892	100,035
Other non-current payables	2,003	59,926	49,587
Other non-current liabilities	-	1	1
Payment of severance benefit	(38)	(2,359)	(1,952)
Contribution to plan assets	(17,990)	(24,995)	(20,683)
Interest received	34,268	33,061	27,357
Dividends received	31,136	67,105	55,528
Interest paid	(58,843)	(62,778)	(51,947)
Income tax paid	(66,169)	(115,104)	(95,245)
Net cash flows provided by operating activities	1,267,623	792,825	656,041
Investing activities			
Decrease (increase) in long-term other receivables	852	(15,193)	(12,572)
Decrease (increase) in short-term loans receivable	3,516	(567)	(469)
Decrease (increase) in long-term loans receivable	(3,020)	1,506	1,246
Decrease (increase) in short-term financial instruments	(7,215)	(8,508)	(7,040)
Decrease in long-term financial instruments	1	6	5
Proceeds from disposal of available-for-sale financial assets	6	773	640
Decrease (increase) in guarantee deposits	251	(19)	(16)
Decrease (increase) in long-term guarantee deposits	874	(1,558)	(1,289)
Proceeds from disposal of property, plant and equipment	969	2,081	1,722
Proceeds from disposal of intangible assets	301	200	165
Acquisition of available-for-sale financial assets	(2,841)	(1,779)	(1,472)
Acquisition of associates	(1,446)	-	-
Acquisition of property, plant and equipment	(102,913)	(95,554)	(79,068)
Acquisition of intangible assets	(165,414)	(64,227)	(53,146)
Acquisition of investment properties	(78)	-	-
Receipt of government grants	369	-	-
Proceeds from disposal of disposal groups classified as held for sale	67,657	-	-
Net cash flows used in investing activities	(208,131)	(182,839)	(151,294)

(Continued)

POSCO DAEWOO Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2015 and 2016 (cont'd)

	Korean won in millions		U.S dollar in thousands (Note 2)
	2015	2016	2016
Financing activities			
Increase(decrease) in short-term borrowings	(1,084,559)	(338,366)	(279,988)
Proceeds from long-term borrowings	217,368	52,634	43,553
Repayment of long-term borrowings	(199,607)	(114,772)	(94,971)
Issuance of bonds	336,373	149,483	123,693
Paid-in capital increase of subsidiaries	874	919	760
Disposal of subsidiaries	-	3,970	3,285
Dividends paid	(56,938)	(56,938)	(47,115)
Redemption of bonds	(303,969)	(350,000)	(289,615)
Paid of financial lease liabilities	(5,534)	(8,417)	(6,965)
Net cash flows used in financing activities	(1,095,992)	(661,487)	(547,363)
Net decrease in cash and cash equivalents	(36,500)	(51,501)	(42,616)
Cash and cash equivalents at January 1	256,653	224,658	185,898
Cash and cash equivalents on the statements of financial position	250,455	224,658	185,898
Cash and cash equivalents included in disposal groups classified as held for sale	6,198	-	-
Net foreign exchange difference	4,505	552	457
Cash and cash equivalents at December 31	₩ 224,658	₩ 173,709	\$ 143,739

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

POSCO DAEWOO Corporation and its subsidiaries
Notes to the consolidated financial statements
December 31, 2015 and 2016

1. Corporate information

The organization and business of POSCO DAEWOO Corporation (the "Company") and the consolidated subsidiaries, which consist of 25 foreign subsidiaries (collectively referred to as the "Group"), are described below.

1.1 The parent company

The Company was incorporated on December 27, 2000 as a result of a spin-off of the trading segment of Daewoo Corporation. The Company changed its name from Daewoo International Corporation to POSCO DAEWOO Corporation in accordance with the resolution approved at the general shareholders' meeting held on March 14, 2016.

The Company is engaged in various business activities, such as export services, export agency services, intermediary trading, manufacturing, distribution and natural resource development. The primary products sold by the Company include various industrial grade steel, metals, chemicals, automobile parts, machinery, ships, plants, electronics, special materials, grain and petroleum.

The Company listed its shares on the Korea Exchange on March 23, 2001. The Company's issued capital as at the spin-off date amounted to ₩93,100 million and as at December 31, 2016, amounted to ₩569,381 million, (\$471,147 thousand) through several rounds of conversion of debt to equity swaps and share dividends. The Company's major stockholder is POSCO, which owns 60.31% of the Company's total outstanding shares.

1.2 Consolidated subsidiaries

Details of consolidated subsidiaries as at December 31, 2015 and 2016 are as follows:

Subsidiaries	Business	Number of shares	Country of domicile	Equity ownership (%)	
				2015	2016
POSCO DAEWOO America Corp. (*5)	Trading	555,000	USA	100	100
POSCO DAEWOO Deutschland GmbH(*5)	Trading	-	Germany	100	100
POSCO DAEWOO Japan Corp. (*5)	Trading	9,600	Japan	100	100
POSCO DAEWOO Singapore Pte. Ltd. (*5)	Trading	3,500,000	Singapore	100	100
POSCO DAEWOO China Co., Ltd. (*5)	Trading	-	China	100	100
POSCO DAEWOO Italia S.R.L. (*5)	Trading	-	Italy	100	100
Daewoo Textile LLC(*3)	Cotton spinning	-	Uzbekistan	100	100
Daewoo Textile Bukhara LLC(*3)	Cotton spinning	-	Uzbekistan	100	-
POSCO DAEWOO Australia Holdings Pty. Ltd. (*1) (*5)	Natural resource development	119,676,667	Australia	100	100
POSCO DAEWOO Mexico S.A. de C.V. (*5)	Trading	53,078	Mexico	100	100
Tianjin Daewoo Paper Manufacturing Co., Ltd. (*2)	Paper manufacturing	-	China	54	25
POSCO DAEWOO Shanghai Co., Ltd. (*5)	Trading	-	China	100	100
POSCO DAEWOO Malaysia Sdn. Bhd. (*5)	Trading	6,091,002	Malaysia	100	100
POSCO DAEWOO India Private Ltd. (*5)	Trading	8,940,000	India	100	100
Daewoo Int'l Guangzhou Corp.	Trading	-	China	100	100
Daewoo AAPC Corp.	Steel manufacturing	5,000	USA	100	100
Brasil Saopaulo Steel Processing Center	Steel manufacturing	-	Brazil	51	51
PT. Bio Inti Agrindo	Natural resource development	381,429	Indonesia	85	85
POSCO DAEWOO Shanghai Waigaoqiao Co.,Ltd. (*5)	Trading	-	China	100	100
POSCO DAEWOO Vietnam Co., Ltd. (*5)	Trading	-	Vietnam	100	100
POSCO DAEWOO E&P Canada Corp. (*5)	Natural resource development	1,519	Canada	100	100
POSCO DAEWOO Myanmar Corp. (*5)	Trading	493,240	Myanmar	100	100
Daewoo Power and Infra (Pty) Ltd.	Service	-	RSA	100	100
POSCO DAEWOO Power(PNGPOM) Ltd. (*5)	Service	16,793,045	Papua New Guinea	100	100
Daewoo Precious Resources Co., Ltd.	Natural resource development	4,200	Myanmar	70	70
Daewoo Power PNG Ltd.	Service	36,239,782	Papua New Guinea	100	100
Daewoo Minerals Canada Corp. (*4)	Natural resource development	1,350,000	Canada	-	100

(*1) POSCO DAEWOO Australia Holdings Pty. Ltd. holds 100% ownership interest in Daewoo Int'l Narrabri Investment Pty. Ltd. and Daewoo Int'l Australia Pty. Ltd.

(*2) Daewoo Paper Co., Ltd. has been sold and the Group lost control on Tianjin Daewoo Paper Co., Ltd. accordingly.

POSCO DAEWOO Corporation and its subsidiaries
Notes to the consolidated financial statements
December 31, 2015 and 2016

1.2 Consolidated subsidiaries (cont'd)

(*3) Daewoo Textile Fergana LLC merged with Daewoo Textile Bukhara LLC, and changed its name to Daewoo Textile LLC.

(*4) Daewoo Minerals Canada Corp. was newly established in 2016.

(*5) In accordance with the resolution made at the shareholders' meeting on March 13, 2016, some of its subsidiaries changed their name accordingly as follow :

Before	After
Daewoo Int'l (America) Corp.	POSCO DAEWOO America Corp.
Daewoo Int'l (Deutschland) GmbH	POSCO DAEWOO Deutschland GmbH
Daewoo Int'l Japan Corp.	POSCO DAEWOO Japan Corp.
Daewoo Int'l Singapore Pte. Ltd.	POSCO DAEWOO Singapore Pte Ltd.
Daewoo (China) Co., Ltd.	POSCO DAEWOO China Co.,Ltd.
Daewoo Italia S.R.L.	POSCO DAEWOO Italia S.R.L.
Daewoo Int'l Australia Holdings Pty. Ltd.	POSCO DAEWOO Australia Holdings Pty. Ltd.
Daewoo Int'l Mexico S.A. de C.V.	POSCO DAEWOO Mexico S.A. de C.V.
Daewoo Int'l Shanghai Co., Ltd.	POSCO DAEWOO Shanghai Co.,Ltd.
Daewoo Int'l (M) Sdn. Bhd.	POSCO DAEWOO Malaysia SDN BHD
Daewoo Int'l India Private Ltd.	POSCO DAEWOO India PVT.,Ltd.
Daewoo Int'l Shanghai Waigaoqiao Co.,Ltd.	POSCO DAEWOO Waigaoqiao Shanghai Co.,Ltd.
Daewoo Int'l Vietnam Co., Ltd.	POSCO DAEWOO Vietnam Co.,Ltd.
Daewoo E&P Canada Corp.	POSCO DAEWOO E&P Canada Corp.
Myanmar Daewoo Int'l Corp.	POSCO DAEWOO Myanmar Corp. Ltd.
Hanjung Power Ltd	POSCO DAEWOO Power(PNGPOM) Ltd.

1.3 Summarized financial information of the Company and its subsidiaries

Summarized financial information of the Company and its subsidiaries for the year ended December 31, 2016 is as follows (Korean won in millions):

	Assets	Liabilities	Equity	Sales	Net profit (loss)
POSCO DAEWOO Corporation	₩ 7,419,600	₩ 4,988,663	₩ 2,430,937	₩ 15,417,229	₩ 123,709
POSCO DAEWOO America Corp. (*5)	533,571	476,380	57,191	1,329,374	643
POSCO DAEWOO Deutschland GmbH(*5)	205,346	193,007	12,339	401,379	1,284
POSCO DAEWOO Japan Corp. (*5)	163,596	155,783	7,813	642,276	623
POSCO DAEWOO Singapore Pte. Ltd. (*5)	211,122	206,586	4,536	610,787	55
POSCO DAEWOO China Co., Ltd. (*5)	49,441	32,779	16,662	342,802	(35,625)
Daewoo Paper Manufacturing Co., Ltd. (*5)	-	-	-	5,532	(37,064)
POSCO DAEWOO Italia S.R.L. (*5)	102,987	98,042	4,945	405,543	1,818
Daewoo Textile LLC(*3)	136,277	74,652	61,625	154,971	4,895
POSCO DAEWOO Australia Holdings Pty. Ltd. (*1) (*5)	118,937	12,202	106,735	32,299	5,385
POSCO DAEWOO Mexico S.A. de C.V. (*5)	130,781	121,359	9,422	250,033	1,017
Tianjin Daewoo Paper Manufacturing Co., Ltd. (*2)	-	-	-	-	-
POSCO DAEWOO Shanghai Co., Ltd. (*5)	35,742	28,840	6,902	62,953	(512)
POSCO DAEWOO Malaysia Sdn. Bhd. (*5)	34,701	31,713	2,988	154,779	246
POSCO DAEWOO India Private Ltd. (*5)	172,809	169,050	3,759	297,686	1,253
Daewoo Int'l Guangzhou Corp.	16,001	18,224	(2,223)	4,267	(880)
Brasil Saopaulo Steel Processing Center	31,173	67,248	(36,075)	5,404	(1,551)
PT. Bio Inti Agrindo	181,494	151,851	29,643	1,807	(6,102)
POSCO DAEWOO Waigaoqiao Shanghai Co., Ltd. (*5)	1,648	1,646	2	40,979	(273)
POSCO DAEWOO Vietnam Co., Ltd. (*5)	16,443	12,314	4,129	34,580	45
POSCO DAEWOO E&P Canada Corp. (*5)	25,952	19,999	5,953	3,267	(6,196)
POSCO DAEWOO Myanmar Corp. LTD. (*5)	5,522	132	5,390	5,207	(761)
Daewoo Power and Infra (Pty) Ltd.	1,055	930	125	701	(557)
POSCO DAEWOO Power(PNGPOM) Ltd. (*5)	21,127	10,948	10,179	25,282	3,764
Daewoo Precious Resources Co., Ltd.	7,372	-	7,372	-	-
Daewoo Power PNG Ltd.	65,167	53,401	11,766	-	(688)
Daewoo Minerals Canada Corp. (*4)	1,185	-	1,185	-	(23)
	<u>₩ 9,689,049</u>	<u>₩ 6,925,749</u>	<u>₩ 2,763,300</u>	<u>₩ 20,229,137</u>	<u>₩ 54,505</u>
U.S dollar in thousands (Note 2)	<u>\$ 8,017,417</u>	<u>\$ 5,730,864</u>	<u>\$ 2,286,553</u>	<u>\$ 16,739,046</u>	<u>\$ 45,101</u>

1.3 Summarized financial information of the Company and its subsidiaries (cont'd)

(*1) The financial information of Daewoo Int'l Australia Holdings Pty. Ltd. includes Daewoo Int'l Narrabri Investment Pty. Ltd. and Daewoo Int'l Australia Pty. Ltd. as subsidiaries.

(*2) Due to the disposal of Daewoo Paper Manufacturing Co., Ltd., the Group lost its control on Tianjin Daewoo Paper Manufacturing Co., in 2016.

(*3) Daewoo Textile Bukhara LLC was merged with Daewoo Textile Fergana LLC, and Daewoo Textile Fergana LLC changed its name to Daewoo Textile LLC.

(*4) Daewoo Minerals Canada Corp was newly established in 2016.

(*5) The company name was changed in 2016.

The financial information of Daewoo AAPC Corp. is not presented as they are not material to the Group's consolidated financial statements.

2. Basis of preparation and 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 (K-IFRS) enacted by the *Act on External Audit of Stock Companies*. 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 financial statements or the independent auditors' report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments and available-for-sale financial assets that have been measured at fair value. The carrying values of recognized assets and liabilities that are designated as hedged items in fair value hedges that would otherwise be carried at amortized cost are adjusted to record changes in the fair values attributable to the risks that are being hedged in effective hedge relationships. The consolidated financial statements are presented in Korean won (KRW) and all values are rounded to the nearest million, except when otherwise indicated.

2.1.1 Financial statements translation

The accompanying 2016 consolidated financial statements are expressed in Korean won, and solely for convenience of the reader, have been translated into United States dollars at the rate of ₩1,208.5 to US\$ 1, the year-end exchange rate on December 31, 2016. Such translation should not be construed as a representation that the Korean won amount can actually be converted into United States dollars at the exchange rate used for the purpose of such translation.

2.1.2 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as at December 31, 2016. 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

2.1.2 Basis of consolidation (cont'd)

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 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) 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 related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any investment is recognized at fair value.

2.2 Summary of significant accounting policies

2.2.1 Business combinations

Business combinations are accounted for using the acquisition method, unless it is a combination involving entities or businesses under common control. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. Acquisition-related costs incurred are expensed and included in administrative expenses.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss. For each business combination, the acquirer measures the non-controlling interest in the acquiree at the proportionate share of the acquiree's identifiable net assets.

2.2.2 Investment in an associate and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

A joint venture is a 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 are accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. 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.

The statement of comprehensive income reflects the Group's share of the results of operations of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, the Group recognizes its share of any changes, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

The aggregate of the Group's share of profit or loss of an associate and a joint venture is shown on the face of the statement of comprehensive income outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the associate or joint venture.

The financial statements of the associate or joint venture are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its associate or joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, then recognizes the loss as other expenses in the statement of comprehensive income.

2.2.2 Investment in an associate and joint ventures (cont'd)

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

2.2.3 Goodwill

Goodwill is initially measured at cost, being the excess of the consideration transferred and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed of the consolidated subsidiaries. After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Impairment is determined for goodwill by assessing the recoverable amount of each cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash generating unit is less than their carrying amount, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods. Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation.

2.2.4 Current versus non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification.

An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of short-term trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of short-term trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

2.2.5 Fair value measurement

The Group measures financial instruments such as derivatives at fair value at each balance sheet date. Fair value related disclosures for financial instruments and non-financial assets that are measured at fair value or where fair values are disclosed, are summarized in the following notes:

	<u>Notes</u>
Disclosure for valuation methods, significant estimates and assumptions	2,6,29 and 30
Quantitative disclosures of fair value measurement hierarchy	30
Investment properties	12
Financial instruments (including those carried at amortized cost)	6,29 and 30

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

2.2.6 Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable excluding taxes or duty. Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The specific recognition criteria described below must also be met before revenue is recognized.

When the collectability of an amount already included in revenue becomes uncertain, the uncollectible amount or the amount in respect of which recovery has ceased to be probable is recognized as an expense, rather than as an adjustment of the amount of revenue originally recognized.

2.2.6.1 Sale of goods

Revenue from the sale of goods is recognized when the significant risks and rewards of ownership of the goods have passed to the buyer. Revenue received from transactions where the Group acts as an agent without assuming the risks and rewards of ownership of the goods is recognized on a net basis.

2.2.6.2 Rendering of services

Revenue from the rendering of services is recognized by reference to the stage of completion when the amount of revenue can be measured reliably, the stage of completion of the transaction can be measured reliably and the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

When the outcome of the transaction involving the rendering of services cannot be estimated reliably, revenue is recognized only to the extent of the expenses recognized that are recoverable.

2.2.6.3 Interest income

For all financial instruments measured at amortized cost and interest-bearing financial assets classified as available-for-sale (AFS), interest income is recorded using the effective interest rate (EIR). The EIR is the rate that exactly discounts the estimated future cash receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset. Interest income is included in finance income in profit or loss.

2.2.6.4 Dividends

Dividends income is recognized when the Group's right to receive the payment is established.

2.2.7 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less.

2.2.8 Financial assets

All financial assets are recognized initially at fair value plus transactions costs, except in the case of financial assets recorded at fair value through profit or loss. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Financial assets are classified as financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments and AFS financial assets. The Group determines the classification of its financial assets at initial recognition.

2.2.8.1 Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives are also classified as held for trading. Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with changes in fair value recognized in finance costs in the consolidated statement of comprehensive income. Transaction costs attributable to the acquisition of the financial asset at fair value through profit or loss are charged to current operation.

2.2.8.2 Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Group has the positive intention and ability to hold it to maturity. After initial measurement, held-to-maturity investments are measured at amortized cost using the EIR, less impairment. The EIR amortization is included in finance income in the consolidated statement of comprehensive income. The losses arising from impairment are recognized in the consolidated statement of comprehensive income in finance costs.

2.2.8.3 Available-for-sale(AFS) financial assets

AFS financial assets include equity investments and debt securities. Equity investments classified as AFS are those, which are neither classified as held for trading nor designated at fair value through profit or loss. Debt securities in this category are those which are intended to be held for an indefinite period of time and which may be sold in response to needs for liquidity or in response to changes in the market conditions. After initial measurement, AFS financial assets are subsequently measured at fair value with unrealized gains or losses recognized as other comprehensive income (OCI) until the investment is derecognized, at which time the cumulative gain or loss is recognized in other income, or the investment is determined to be impaired, when the cumulative loss is reclassified from the OCI to the profit or loss in other expenses.

2.2.8.4 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortized cost using EIR, less impairment. The EIR amortization is included in finance income in the consolidated statement of comprehensive income.

2.2.8.5 Impairment of financial assets

The Group assesses, at each reporting date, whether there is any objective evidence that a financial asset or a group of financial assets is impaired excluding financial assets at fair value through profit or loss. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred 'loss event') and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. In the case of equity investments classified as AFS, objective evidence includes a significant or prolonged decline in the fair value of the investment below its cost.

For financial assets carried at amortized cost, the Group first assesses whether impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. Evidence of impairment includes the Group's historical loss experience for receivables with similar credit risk characteristics, increased number of delayed payments and significant change of national or local economic conditions that correlate with defaults on the receivables.

For financial assets carried at amortized cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original EIR.

The carrying amount of the asset is reduced directly, except for loans and receivables. The carrying amount of loans and receivables is reduced through use of an allowance account. If the loans and receivables have been extinguished, the loans and receivables are written off and offset against the related allowance account.

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 to the extent that the asset's carrying amount does not exceed what the amortized cost would have been had impairment loss not been recognized. However, impairment losses recognized in profit or loss for an investment in an equity instrument classified as AFS is not reversed through profit or loss.

2.2.8.6 Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e, removed from the Group's consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership.

When it retains substantially all of the risks and rewards of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

2.2.9 Inventories

Inventories are valued at the lower of cost and net realizable value, with cost being determined using the first-in, first-out method, except for materials in-transit which are stated at cost by the specific identification method. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

2.2.10 Non-current assets held for sale and discontinued operations

The Group classifies non-current assets and disposal groups as held for sale or for distribution to equity holders of the parent if their carrying amounts will be recovered principally through a sale or distribution rather than through continuing use. Such non-current assets and disposal groups classified as held for sale or as held for distribution are measured at the lower of their carrying amount and fair value less costs to sell or to distribute. Costs to sell are the incremental costs directly attributable to the sales, excluding the finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable and the asset or disposal group is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the sale will be withdrawn. Management must be committed to the sale expected within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale or as held for distribution. Assets and liabilities classified as held for sale or for distribution are presented separately as current items in the statement of financial position.

A disposal group qualifies as discontinued operation if it is a component of an entity that either has been disposed of, or is classified as held for sale, and:

- Represents a separate major line of business or geographical area of operations
- Is part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations, or
- Is a subsidiary acquired exclusively with a view to resale

Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as profit or loss after tax from discontinued operations in the statement of comprehensive income.

2.2.11 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and/or accumulated impairment losses, if any. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

Subsequent cost is recognized in the carrying amount of the item of property, plant and equipment, if the following recognition criteria are met:

- It is probable that future economic benefits associated with the item will flow to the Group, and
- Cost can be measured reliably.

The carrying amount of the replaced part is expensed, and the expenditures related to repair and maintenance are reflected in current operation as incurred.

Depreciation is computed using the straight-line method over the estimated useful life of the assets as follows:

	<u>Years</u>
Buildings	40 ~ 50
Structures	10 ~ 30
Machinery	4 ~ 25
Others	4

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year end, and adjusted prospectively, if appropriate.

2.2.12 Investment properties

Property held to earn rental income or for capital appreciation is classified as investment properties. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and/or accumulated impairment losses.

Subsequent cost is recognized in the carrying amount of the item of property, plant and equipment, if the following recognition criteria are met:

- It is probable that future economic benefits associated with the item will flow to the Group, and
- Cost can be measured reliably

The carrying amount of the replaced part is expensed, and the expenditures related to repair and maintenance are reflected in current operations as incurred.

Depreciation of investment properties other than land is calculated on a straight-line basis. The useful lives and depreciation method of investment properties are the same as those of property, plant and equipment. The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year end, and adjusted prospectively, if appropriate.

2.2.13 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. The cost of an internally generated intangible asset is the sum of expenditure incurred from the date when the intangible assets first meet the recognition criteria.

2.2.13 Intangible assets (cont'd)

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives except for mining rights are amortized using the straight-line method over the useful life of 5~10 years. Mining rights are amortized using the unit of production method. Memberships are not amortized as their useful life is deemed to be indefinite.

The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at each financial year end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the cash generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

2.2.14 Exploration and evaluation assets, development assets, and mining rights

The Group engages in the development of natural resources either by entering into contracts for sharing the extracted natural resources or by acquiring interests in the related projects. Expenditures related to natural resources are recognized as exploration and evaluation assets, development assets or mining rights. The nature of these intangible assets is as follows:

2.2.14.1 Exploration and evaluation assets

Exploration and evaluation assets consist of expenditures for topographical studies, geophysical studies and drilling and appraisal of oil fields. These assets are reclassified into development assets when the reserves are proven successful.

2.2.14.2 Development assets

Development assets consist of expenditures for fields, construction of production facilities, and others. These development assets are reclassified as mining rights at the inception of the commercial production.

2.2.14.3 Mining rights

Mining rights (production fields) consist of expenditure for improving productivity, oil reservoir management for prediction of oil output and production optimization, and increasing the return rate from crude oil. Mining rights are amortized using the unit of production method.

2.2.15 Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, the Group estimates the asset's recoverable amount. Intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Impairment losses are recognized in profit or loss. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the consolidated statement of comprehensive income.

2.2.16 Leases

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception date. The arrangement is assessed for (i) whether fulfillment of the arrangement is dependent on the use of a specific asset or assets or (ii) the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

2.2.16.1 Group as a lessee

Finance leases that transfer substantially all the risks and benefits incidental to ownership of the leased item to the Group, are capitalized at the commencement of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognized in finance costs in the consolidated statement of comprehensive income.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

Operating lease payments are recognized as an expense in the consolidated statement of comprehensive income on a straight-line basis over the lease term.

2.2.16.2 Group as a lessor

Leases in which the Group does not transfer substantially all the risks and benefits of ownership of an asset are classified as operating leases. Initial direct costs incurred in negotiating an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

2.2.17 Foreign currency translation

The Group's consolidated financial statements are presented in Korean won, which is also the parent company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date. All differences are taken to the profit or loss with the exception of all monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

On consolidation the assets and liabilities of foreign operations are translated into Korean won at the rate of exchange prevailing at the reporting date and their profit or loss and OCI are translated at the average exchange rates for the period. The exchange differences arising on the translation are recognized in OCI. On disposal of a foreign operation, the component of OCI relating to that particular foreign operation is recognized in profit or loss.

2.2.18 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. Any investment income on the temporary investment of those borrowings is deducted from borrowing costs. All other borrowing costs are expensed in the period they occur.

2.2.19 Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with.

When the grant relates to an expense item, it is recognized as income by reducing the related costs on a systemic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset. It is recognized in profit or loss over the life of depreciable asset as a reduced depreciation expenses.

2.2.20 Financial liabilities and equity instruments

Issued debt instrument and equity instrument are classified as either financial liability or equity in accordance with the substance of the contractual arrangement.

2.2.20.1 Equity instruments

An equity instruments is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities.

2.2.20.2 Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount determined in accordance with K-IFRS 1037 *Provisions, Contingent liabilities and Contingent Assets* and the amount initially recognized less cumulative amortization recognized in accordance with K-IFRS 1018 *Revenue*.

2.2.20.3 Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss includes financial liabilities held for trading and financial liabilities designated upon initial recognition at fair value through profit or loss. Financial liabilities are classified as held for trading if they are acquired for the purpose of selling in the near term. Gains or losses on liabilities held for trading are recognized in profit or loss.

2.2.20.4 Other financial liabilities

Other financial liabilities are recognized initially at fair value less directly attributable transaction costs. After initial recognition, other financial liabilities are subsequently measured at amortized cost using the EIR method.

2.2.20.5 Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires.

2.2.21 Severance benefits

The Group operates a defined benefit pension plan, which requires contributions to be made to a separately administered fund.

The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Re-measurements, comprising of actuarial gains and losses, the effect of the asset ceiling, excluding net interest and the return on plan assets (excluding net interest), are recognized immediately in the statement of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Re-measurements are not reclassified to profit or loss in subsequent periods.

2.2.21 Severance benefits (cont'd)

Past service costs are recognized in profit or loss on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes the following changes in the net defined benefit obligation under cost of sales, and selling and administrative expenses in profit or loss (by function).

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements
- Net interest expense or income

2.2.22 Taxes

2.2.22.1 Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Group operates and generates taxable income.

2.2.22.2 Deferred tax

Deferred tax is provided using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognized for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

2.2.22.2 Deferred tax (cont'd)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, would be recognized subsequently if new information about facts and circumstances changed. The adjustments would either be treated as a reduction to goodwill (as long as it does not exceed goodwill) if it was incurred during the measurement period or in profit or loss.

2.2.22.3 Recognition of current and deferred tax

Current and deferred tax are recognized as income or an expense and included in profit or loss for the period, except to the extent that the tax arises from (a) a transaction or event which is recognized, in the same or a different period, outside profit or loss, either in OCI or directly in equity; or (b) a business combination. In case of a business combination, the Group recognizes deferred tax assets or liabilities relating to temporary differences arising in a business combination. Consequently, those deferred tax assets and liabilities affect the amount of goodwill or the bargain purchase gain.

2.2.23 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. When it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or the amount of the obligation cannot be measured with sufficient reliability, a contingent liability is disclosed, but not recognized.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Where the Group expects some or all of a provision to be reimbursed, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain.

2.2.24 Derivatives

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value at the reporting date, and changes therein are recognized in profit or loss. For the purpose of hedge accounting, hedges are classified as fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment.

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which the Group wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk.

Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

2.2.24.1 Fair value hedges

Under a fair value hedge, the change in the fair value of a hedging derivative is recognized in profit or loss and the change in the fair value of the hedged item attributable to the risk hedged is recorded as a part of the carrying value of the hedged item and is also recognized in profit or loss.

When the hedging instrument expires or is sold, terminated or exercised, hedge no longer meets the criteria for hedge accounting or the entity revokes the designation of hedge relationship, the hedge accounting is discontinued prospectively.

2.2.24.2 Embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the following criteria have been met: (a) the economic characteristics and risks of the embedded derivatives are not closely related to those of the host contract, and (b) the host contract is not measured at fair value through profit or loss.

2.3 Significant accounting judgments, estimates and assumptions

The preparation of the Group's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

Other disclosures relating to the Group's exposure to risks and uncertainties are disclosed in Note 29, which includes:

- Capital management
- Financial instruments risk management
- Sensitivity analysis disclosures

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

2.3.1 Impairment of non-financial assets

The Group assesses at the end of each reporting period whether there is any indication that non-financial assets may be impaired. If any indication exists, the Group estimates the asset's recoverable amount. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually. To estimate the recoverable amount, management should estimate future cash flows from the assets or CGU and determine the discount rate appropriate for the future cash flow.

2.3.2 Pension benefits

The present value of the defined benefit obligation is determined using actuarial valuations. An actuarial valuation involves making various assumptions. It includes the determination of the discount rate, future salary growth rate and mortality rates. Due to the complexity of the valuation, the underlying assumptions and its long term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

2.3.3 Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flow model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

2.4 New and amended standards and interpretations

The Group applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2016. The nature and the impact of each new standard and amendment are described below:

K-IFRS 1114 Regulatory Deferral Accounts

K-IFRS 1114 is an optional standard that allows an entity, whose activities are subject to rate-regulation, to continue applying most of its existing accounting policies for regulatory deferral account balances upon its first-time adoption of K-IFRS. Entities that adopt K-IFRS 1114 must present the regulatory deferral accounts as separate line item on the statement of financial position and present movements in these account balances as separate line item in the consolidated statements of comprehensive income. The standard requires disclosure of the nature of, and risks associated with, the entity's rate-regulation and the effects of that rate-regulation on its financial statements. Since the Group already adapted K-IFRS and is not involved in the rate-regulated activities, this standard is not applied.

Amendments to K-IFRS 1111 Joint Arrangements: Accounting for Acquisitions of Interests

The amendments to K-IFRS 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 K-IFRS 1103 Business Combinations principles for business combination accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation if joint control is retained. In addition, a scope exclusion has been added to K-IFRS 1111 to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party. The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are applied prospectively. These amendments have no impacts on the Group's consolidated financial statements from January 1, 2016

Amendments to K-IFRS 1016 and K-IFRS 1038 Clarification of Acceptable Methods of Depreciation and Amortization

The amendments clarify the principle in K-IFRS 1016 and K-IFRS 1038 that revenue reflects a pattern of economic benefits that are generated from operating a business (of which an asset is included) 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 be used in very limited circumstances to amortize intangible assets. The amendments are effective prospectively for annual periods beginning on or after January 1, 2016, with early adoption permitted. These amendments have no impact on the Group's consolidated financial statements given that the Group has not used a revenue-based method to depreciate its non-current assets.

Amendments to K-IFRS 1016 and K-IFRS 1041 Agriculture Bearer Plants

The amendments change the accounting requirements for biological assets that meet the definition of bearer plants. Under the amendments, biological assets that meet the definition of bearer plants will no longer be within the scope of K-IFRS 1041 Agriculture. Instead, K-IFRS 1016 is applied. After initial recognition, bearer plants will be measured under K-IFRS 1016 at accumulated cost (before maturity) and using either the cost model or revaluation model (after maturity). The amendments also require products which grow on bearer plants will remain in the scope of K-IFRS 1041 measured at fair value less costs to sell. For government grants related to bearer plants, K-IFRS 1020 Accounting for Government Grants and Disclosure of Government Assistance is applied. The amendments are applied retrospectively and do not have any impact on the Group's consolidated financial statements as it does not have any bearer plants.

Amendments to K-IFRS 1001 Disclosure Initiative

The amendments clarify:

- The materiality requirements in K-IFRS 1001
- That specific line items in the statement of comprehensive income 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

2.4 New and amended standards and interpretations (cont'd)

Furthermore, the amendments clarify the requirements for additional subtotal which are presented in the statement of financial position and the statement of comprehensive income. These amendments have no impact on the Group's consolidated financial statements.

Amendments to K-IFRS 1110, K-IFRS 1112 and K-IFRS 1028 *Investment Entities: Applying the Consolidation Exception*

The amendments address issues that have arisen in applying the investment entities exception under K-IFRS 1110 Consolidated Financial Statements. The amendments to K-IFRS 1110 clarify that the exemption from presenting consolidated financial statements applies to a parent entity that is a subsidiary of an investment entity, when the investment entity measures all of its subsidiaries at fair value.

Furthermore, the amendments to K-IFRS 1110 clarify that only a subsidiary of an investment entity that is not an investment entity itself and that provides support services to the investment entity is consolidated. All other subsidiaries of an investment entity are measured at fair value. The amendments to K-IFRS 1028 Investments in Associates and Joint Ventures allow the investor, when applying the equity method, to retain the fair value measurement applied by the investment entity associate or joint venture to its interests in subsidiaries. These amendments are applied retrospectively and have no impact on the Group's consolidated financial statements as the Group has not adopted the exception.

K-IFRS 1011 Construction Contract and K-IFRS 2115 *Agreements for the Construction of Real Estate*

The amendments require additional disclosures of information on construction contracts when the percentage of work completed is measured based on the ratio of the total costs incurred to date to the total estimated contract costs, and the contract revenue exceeds 5% of the preceding year's total revenue. The amendments are effective for annual periods beginning on or after 1 January 2016, and may not prepare comparative information in the first year of adoption. These amendments will not have the financial impact on the Group's consolidated financial statements.

Annual Improvements 2012-2014 Cycle

These amendments do not have any impact on the Group's consolidated financial statements. The improvements include:

K-IFRS 1105 *Non-current Assets Held for Sale and Discontinued Operations*

Non-current assets (or disposal groups) are generally disposed of either through sale or distribution to the owners. The amendment clarifies that changing from one of these disposal methods to the other would not be considered a new plan of disposal, rather it is a continuation of the original plan. There is, therefore, no interruption of the application of the requirements in K-IFRS 1105. This amendment is applied prospectively.

K-IFRS 1107 *Financial Instruments: Disclosures*

(i) Servicing contracts

The amendment clarifies that a servicing contract that includes a fee can constitute continuing involvement in a financial asset. An entity must assess the nature of the fee and the arrangement against the guidance for continuing involvement in K-IFRS 1107 in order to assess whether the disclosures are required. The assessment of which servicing contracts constitute continuing involvement must be made retrospectively. However, the required disclosures need not be provided for any period beginning before the annual period in which the entity first applies the amendments.

(ii) Applicability of the amendments to K-IFRS 1107 to condensed interim financial statements

The amendment clarifies that the offsetting disclosure requirements may not be applied to condensed interim financial statements, unless such disclosures provide a significant update to the information reported in the most recent annual report. This amendment is applied retrospectively.

K-IFRS 1019 *Employee Benefits*

The amendment clarifies that market depth of high quality corporate bonds is assessed based on the currency in which the obligation is denominated, rather than the country where the obligation is located. When there is no deep market for high quality corporate bonds in that currency, government bond rates must be used. This amendment is applied prospectively.

2.4 New and amended standards and interpretations (cont'd)

K-IFRS 1034 Interim Financial Reporting

The amendment clarifies that the required interim disclosures must either be in the interim financial statements or incorporated by cross-reference between the interim financial statements and wherever they are included within the interim financial report (e.g., in the management commentary or risk report). The other information within the interim financial report must be available to users on the same terms as the interim financial statements and at the same time. This amendment is applied retrospectively.

2.5 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.

K-IFRS 1109 Financial Instruments

K-IFRS 1109 Financial Instruments, which was enacted on September 25, 2015, is effective for annual periods beginning on or after January 1, 2018, with early application permitted. The amendments will replace K-IFRS 1039 *Financial Instruments: Recognition and Measurement*. The Group plans to adopt K-IFRS 1109 for annual periods beginning on or after January 1, 2018.

The new K-IFRS 1109 is retrospectively applied in principle, but there are some exceptions such as exemption of restatement of comparative information for classification, measurement, impairment of financial instruments. For hedge accounting, the requirements are generally applied prospectively, with some exceptions such as time value accounting of options.

The main features of K-IFRS 1109 include: a business model for the managing financial assets; classification and measurement of financial assets based on contractual cash flow characteristics of financial assets; an impairment model for financial instruments based on expected credit losses; the hedged item that meet the requirements of hedge accounting, increases in hedging instruments, or changes in the evaluation method for hedge effectiveness.

The effective implementation of K-IFRS 1109 will likely require analyses on financial effects, establishment of accounting policies, development of an accounting system, and stabilization of the system. The effect on the financial statements for the first-time adoption of the standard may differ depending on the selection and judgment of accounting policies in accordance with the standard, as well as the Group's financial instruments and economic conditions during the period.

The Group is preparing for its internal control procedures, or the accounting system related to the adoption of K-IFRS 1109, and will analyze financial effect of K-IFRS 1109 on its consolidated financial statements. General impacts on the Group's consolidated financial statements upon the adoption of the standard are as follows;

(i) Classification and measurement of financial assets

If new K-IFRS 1109 is applied, the Group will classify financial assets as subsequently measured at amortized cost, fair value through other comprehensive income or fair value through profit or loss on the basis of both: The Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. For hybrid contracts with financial asset hosts, embedded derivatives are not separated and financial assets are classified in their entirety.

Business model	Principal and interest cash flows	Others
Collection of contractual cash flows	Amortized cost	
Collection and sale of contractual cash flows	Fair value through other comprehensive income	Fair value through profit or loss
Sale and others	Fair value through profit or loss	

In accordance with K-IFRS 1109, equity instruments that are not held for trading purposes are subject to irrevocable decision at the initial recognition to measure at FVOCI, and a subsequent recycling from comprehensive income to profit or loss is not permitted. The Group's equity instruments classified as available-for-sale financial assets as of December 31, 2016 are described in Note 6.

2.5 Standards issued but not yet effective (cont'd)

In accordance with K-IFRS 1109, debt instruments that their cash flows are not composed solely of principal and interest based on contractual terms, debt instruments held for trading purposes, and equity instruments that are not measured at FVOCI are measured at FVTPL. The Group does not have debt or equity instruments classified as financial assets at FVTPL as of December 31, 2016.

(ii) Classification and measurement of financial liabilities

Based on the new K-IFRS 1109, changes in the fair value of a financial liability designated as measured at FVTPL that arise from changes in the liability's credit risk are presented in other comprehensive income, instead of profit or loss. The changes in the liability's credit risk are recognized in profit or loss if the changes create or enlarge an accounting mismatch had it been presented in other comprehensive income.

Some of the changes in the fair value of financial liabilities designated as at FVTPL, which were recognized in profit or loss under the current K-IFRS 1039, are presented in other comprehensive income; therefore, gains and losses on valuation of financial liabilities may decrease. The Group does not have any financial liabilities measured at FVTPL as of December 31, 2016.

(iii) Impairment: financial assets and contract assets

Under the current K-IFRS 1039, impairment losses are recognized when there is objective evidence of impairment based on an incurred loss model; however, under K-IFRS 1109, impairment losses are recognized on debt instruments, lease receivables, contract assets, loan commitment, and financial guarantee contracts that are accounted for at amortized cost, or FVOCI, based on an expected credit loss impairment model.

K-IFRS 1109 outlines a three-stage model for 12-month expected credit losses, or lifetime expected credit losses based on changes in credit risk since initial recognition of financial assets; as a result, credit losses can be recognized earlier than the current K-IFRS 1039.

Classification (*1)		Loss allowance
Stage 1	The credit risk on a financial instrument has not increased significantly since initial recognition (*2)	12-month expected credit losses: The expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date.
Stage 2	The credit risk on a financial instrument has increased significantly since initial recognition	Lifetime expected credit losses: The expected credit losses that result from all possible default events over the expected life of a financial instrument.
Stage 3	Credit-impaired	

(*1) For trade receivables or contract assets in accordance with K-IFRS 1115 *Revenue from Contracts with Customers*, which does not contain a significant financing component, the Group is to measure the loss allowance at an amount equal to lifetime expected credit losses; however, if it contains a significant financial component, the Group can choose as its accounting policy to measure the loss allowance at an amount equal to lifetime expected credit losses. For lease receivables, the Group may choose as its accounting policy to measure the loss allowance at an amount equal to lifetime expected credit losses.

(*2) For financial instruments with low credit risk at the reporting date, it may be considered that the credit risk did not increase significantly.

Under K-IFRS 1109, the Group is to recognize the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for a financial asset that is considered credit-impaired at initial recognition.

Trade and other receivables and available-for-sale financial assets designated as measured at amortized cost as at December 31, 2016, are described in Note 5.

2.5 Standards issued but not yet effective (cont'd)

(iv) Hedge accounting

K-IFRS 1109 applies mechanics of hedge accounting (fair value hedge accounting, cash flow hedge, foreign entities net investment hedge) specified in the current K-IFRS 1039; however, the Group changed from the complex and rule-based hedge accounting requirements of K-IFRS 1039 to the principle-based approach which focuses on the risk management activities. Requirements for application of hedge accounting are relaxed by enlarging items designated as hedges and hedging instruments, evaluating the high risk avoidance effects, and eliminating the quantitative criteria (80 ~ 125%).

Upon application of hedge accounting of K-IFRS 1109, some transactions that do not meet the criteria for hedge accounting of the current K-IFRS 1039 may be accounted for using the hedge accounting; therefore, volatility in profit or loss may be reduced.

At the end of the reporting period, the details of the assets, liabilities and firm commitment contracts for which the Group applies hedge accounting are described in Note 18.

The Group can elect to continue to apply the current K-IFRS 1039 hedge accounting requirements upon initial application of K-IFRS 1109.

K-IFRS 1115 Revenue from Contracts with Customers

K-IFRS 1115 Revenue from Contracts with Customers, which was enacted on November 6, 2015, is effective for annual periods beginning on or after January 1, 2018, with early application permitted. The new standard will supersede the following K-IFRS: K-IFRS 1018 *Revenue*, K-IFRS 1011 *Construction Contracts*, K-IFRS 2031 *Revenue-Barter Transactions Involving Advertising Services*, K-IFRS 2113 *Customer Loyalty Programmes*, K-IFRS 2115 *Agreements for the Construction of Real Estate*, and K-IFRS 2118 *Transfers of Assets from Customers*. The Group applies K-IFRS 1115 beginning on or after January 1, 2018 and will make the amendments retrospectively on the statement of the previous reporting period, presented for comparative purposes in accordance with K-IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors*. As at January 1, 2017, the Group plans to apply a practical expedient for completed contracts, under which the Group does not restate its financial statements.

The current K-IFRS 1018 provides the criteria for the recognition of revenue relating to: sale of goods, rendering of services, interest, royalties, dividends and construction contracts; however, under the new K-IFRS 1115, revenue is recognized by applying a five-stage revenue recognition model (① Identify a contract with a customer. → ② Identify the performance obligations in the contract. → ③ Determine the transaction price → ④ Allocate the transaction price to the separate performance obligations in the contract. → ⑤ Recognize revenue when the entity satisfies a performance obligation) to its all contracts with customers.

The Group is preparing for its internal control procedures, or the accounting system related to the adoption of K-IFRS 1115, and will analyze financial effect of K-IFRS 1115 on its separate financial statements. The Group is planning to analyze the impact related to the adoption of K-IFRS 1115 by the period ended December 31, 2017, and its results will be disclosed within accounts note.

General impacts on the Group's financial statements upon the adoption of K-IFRS 1115 are as follows. However, the followings do not include all possible impacts and may change on the future analysis result.

(1) Determine the transaction price

The Group is engaged in providing export services, export agency services and intermediary trading. For the year ended December 31, 2016, the Group recognized revenue of ₩15,757,587 million (\$ 13,038,963 thousand) for sales of goods, accounting for 95.55% of the Group's total revenue.

2.5 Standards issued but not yet effective (cont'd)

The transaction price is the amount of consideration in a contract to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer. The transaction price is an estimation of what the company expects to receive in the future, not the amount promised in a contract with a customer. If the consideration promised in a contract with a customer includes variable amounts such as discount, price concessions, incentives or others, the transaction price is consisted of fixed amounts and variable amounts. The variable amount is an estimation value: higher amount of expected value or highly possible amount.

Upon application of K-IFRS 1115, the Group estimates the variable amount with the method which the Group expects to anticipate more precisely. The Group recognizes revenue by including variable amount in the transaction price only to the extent that it is highly unlikely that a recognized significant portion of the cumulative revenue is reversed.

(2) Allocate the transaction price to the performance obligations in the contract

In case of a term-base sales contract, numbers of performance obligations can be identified in a single contract. In such cases, the transaction price should be allocated to each performance obligation and revenue should be recognized for each performance obligation performed. Where a contract has multiple performance obligations, the transaction price will be allocated to the performance obligations in the contract by reference to their relative standalone selling prices. The standalone selling price is the price at which an entity would sell a promised good or service separately to a customer. If a standalone selling price is not directly observable, an entity shall estimate the standalone selling price. Suitable methods for estimating the standalone selling price of a good or service include, but are not limited to, the following:

Method	Contents
Adjusted market assessment approach	Evaluating the market in which an entity sells goods or services, and estimating the price that a customer in that market would be willing to pay for those goods or services.
Expected cost plus a margin approach	Forecasting its expected costs of satisfying a performance obligation and then adding an appropriate margin for that good or service.
Residual approach	Estimating the stand-alone selling price by reference to the total transaction price less the sum of the observable stand-alone selling prices of other goods or services promised in the contract.

Upon application of K-IFRS 1115, where a contract has multiple performance obligations, the transaction price will be allocated to the performance obligations in the contract by reference to their relative standalone selling prices. The Group will implement the most reasonable approach to estimate the standalone selling price of each performance obligation.

Amendments to K-IFRS 1110 and K-IFRS 1028 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*

The amendments address the conflict between K-IFRS 1110 and K-IFRS 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 K-IFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The effective date of these amendments has been deferred indefinitely, but an entity that adopts the amendments early must apply them prospectively. These amendments are not expected to have any impact on the Group's consolidated financial statement.

2.5 Standards issued but not yet effective (cont'd)

Amendments to K-IFRS 1007 *Statement of Cash Flows: Disclosure Initiative*

The amendments to K-IFRS 1007 Statement of Cash Flows are part of the IASB's Disclosure Initiative and require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. On initial application of the amendment, entities are not required to provide comparative information for preceding periods. These amendments are effective for annual periods beginning on or after 1 January 2017, with early application permitted. Application of the amendments will result in additional disclosures provided by the Group.

Amendments to K-IFRS 1012 *Recognition of Deferred Tax Assets for Unrealised Losses*

The amendments clarify that an entity needs to consider whether tax law restricts the sources of taxable profits against which it may make deductions on the reversal of that deductible temporary difference. Furthermore, the amendments provide guidance on how an entity should determine future taxable profits and explain the circumstances in which taxable profit may include the recovery of some assets for more than their carrying amount.

Entities are required to apply the amendments retrospectively. However, on initial application of the amendments, the change in the opening equity of the earliest comparative period may be recognized in the opening retained earnings (or in another component of equity, as appropriate), without allocating the change between opening retained earnings and other components of equity. Entities applying this relief must disclose that fact. These amendments are effective for annual periods beginning on or after 1 January 2017 with early application permitted. If an entity applies the amendments for an earlier period, it must disclose that fact. These amendments are not expected to have any impact on the Group

Amendments to K-IFRS 1102 *Classification and Measurement of Share-based Payment Transactions*

Amendments to K-IFRS 1102 Share-based Payment address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled.

On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. The amendments are effective for annual periods beginning on or after 1 January 2018, with early application permitted. The Group expects there will be no impact on its consolidated financial statements.

2.6 Date of authorization for issue

The consolidated financial statements of the Group for the year ended December 31, 2016 were authorized at the meeting of the Group's Board of Directors held on January 25, 2017 and are scheduled to be approved at the Group's general shareholders' meeting to be held on March 13, 2017.

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3. Segment information

3.1 Operating segment

For management purposes, the Group has three reportable operating segments (trading, natural resource development and others). Accounting policies of each segment are the same as those of the Group mentioned in Note 2.

The financial performance and financial position of each segment for the year ended December 31, 2016 are as follows:

	Korean won in millions					U. S. dollar in
	Trading	Natural resource development	Others	Consolidation adjustment	Total	thousands (Note 2)
Sales:						
Total sales	₩ 19,431,836	₩ 594,585	₩ 202,717	₩ -	₩ 20,229,138	\$ 16,739,047
Inter-segment sales	(3,674,249)	-	(62,799)	-	(3,737,048)	(3,092,303)
Net sales	<u>₩ 15,757,587</u>	<u>₩ 594,585</u>	<u>₩ 139,918</u>	<u>₩ -</u>	<u>₩ 16,492,090</u>	<u>\$ 13,646,744</u>
Profit(loss) for the year	₩ (117,996)	₩ 232,204	₩ 6,980	₩ 1,025	₩ 122,213	\$ 101,129
Total asset	₩ 5,820,933	₩ 3,133,862	₩ 460,049	₩ (1,286,480)	₩ 8,128,364	\$ 6,725,994
Total liabilities	₩ 4,985,873	₩ 627,521	₩ 213,526	₩ (1,147,363)	₩ 4,679,557	\$ 3,872,205

3.2 Adjustments and eliminations

Current taxes, deferred taxes and certain financial assets and financial liabilities are not allocated to individual segments as they are accounted for at the enterprise level.

Reconciliation of assets is as follows:

	Korean won in	U. S. dollar in
	millions	thousands
	2016	(Note 2)
	2016	2016
Segment operating assets	₩ 8,128,364	\$ 6,725,994
Current tax assets	8,867	7,339
Deferred tax assets	151,551	125,405
Total assets	<u>₩ 8,288,782</u>	<u>\$ 6,858,738</u>

Reconciliation of liabilities is as follows:

	Korean won in	U. S. dollar in
	millions	thousands
	2016	(Note 2)
	2016	2016
Segment operating liabilities	₩ 4,679,557	\$ 3,872,205
Current tax liabilities	47,056	38,938
Deferred tax liabilities	4,307	3,564
Current portion of bonds	294,733	243,883
Non-current bonds	759,477	628,446
Total liabilities	<u>₩ 5,785,130</u>	<u>\$ 4,787,036</u>

POSCO DAEWOO Corporation and its subsidiaries
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3.3 Geographic information

Sales by geographic area are based on the geographical location of the market and customers. Sales for the year ended December 31, 2016 by geographic area are as follows:

	Korean won in millions					U. S. dollar in thousands (Note 2)	
	Domestic	Asia (excluding China)	China	North America	Others	Total	Total
Sales:							
Total sales	₩ 1,171,784	₩ 7,916,218	₩ 3,429,043	₩ 2,552,364	₩ 5,159,729	₩ 20,229,138	\$ 16,739,047
Inter-segment sales	(213,129)	(1,310,659)	(270,409)	(1,108,052)	(834,799)	(3,737,048)	(3,092,303)
Net sales	₩ 958,655	₩ 6,605,559	₩ 3,158,634	₩ 1,444,312	₩ 4,324,930	₩ 16,492,090	\$ 13,646,744

4. Cash and cash equivalents

Cash and cash equivalents as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Cash	₩ 1,019	₩ 1,751	\$ 1,449
Savings account and checking account	208,914	159,302	131,818
Other cash equivalents	14,725	12,656	10,472
	₩ 224,658	₩ 173,709	\$ 143,739

5. Trade and other receivables

Trade and other receivables as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Current:			
Trade receivables	₩ 3,109,268	₩ 3,456,772	\$ 2,860,383
Allowance for doubtful accounts	(53,231)	(93,338)	(77,235)
Other receivables	100,803	142,402	117,834
Allowance for doubtful accounts	(42,140)	(73,232)	(60,597)
Accrued income	167	148	122
Short-term guarantee deposits	791	534	442
Short-term loans receivable	820	943	780
Allowance for doubtful accounts	-	(16)	(13)
Current portion of long-term loans receivable	39,779	49,479	40,942
	3,156,257	3,483,692	2,882,658
Non-current:			
Long-term trade receivables	6,140	5,450	4,510
Long-term loans receivable	392,781	359,971	297,865
Long-term other receivables	89,524	40,709	33,686
Allowance for doubtful accounts	-	(5,893)	(4,876)
Long-term guarantee deposits	5,591	7,237	5,988
	494,036	407,474	337,173
	₩ 3,650,293	₩ 3,891,166	\$ 3,219,831

5.1 Allowance for doubtful accounts

Changes in allowance for doubtful accounts related to trade receivables for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands
	2015	2016	(Note 2) 2016
Beginning balance	₩ 39,917	₩ 53,231	\$ 44,047
Bad debt expenses	38,032	31,793	26,308
Write-off	(26,038)	(3,368)	(2,787)
Foreign exchange translation loss	1,320	11,682	9,667
Ending balance	₩ 53,231	₩ 93,338	\$ 77,235

5.2 Financial assets transferred but not derecognized

As at December 31, 2016, trade receivables transferred with a book value amounting to ₩348,094 million (\$ 288,038 thousand) are not derecognized. Cash received through factoring of such receivables is accounted for as short-term borrowings.

The Group factored the above trade receivables to financial institutions with recourse. The Group retains the risks of ownership arising from credit risk such as default of debtors. The fair values of the above receivables transferred and the related borrowings are not significantly different from their book values.

6. Other financial assets

Other current financial assets as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands
	2015	2016	(Note 2) 2016
Deposits in financial institutions	₩ 23,629	₩ 32,534	\$ 26,921

Other non-current financial assets as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands
	2015	2016	(Note 2) 2016
Deposits in financial institutions	₩ 21	₩ 15	\$ 13
Available-for-sale financial assets	105,585	108,677	89,927
	₩ 105,606	₩ 108,692	\$ 89,940

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6. Other financial assets (cont'd)

Available-for-sale financial assets as at December 31, 2015 and 2016 are as follows:

	Korean won in millions						U. S. dollar in thousands (Note 2)
	2015			2016			2016
	Book value	Number of shares	Equity owner- ship (%)	Acquisition cost	Fair value or net asset value	Book value	Book value
Marketable securities:							
Maruichi Steel Tube Ltd.	₩ 4,187	120,000	0.12	₩ 2,933	₩ 4,734	₩ 4,734	\$ 3,917
TK-Chemical Co., Ltd.	17,680	8,000,000	8.80	14,818	15,360	15,360	12,710
IQ Power Licensing AG	583	5,119,129	1.90	679	526	526	435
	<u>22,450</u>			<u>18,430</u>	<u>20,620</u>	<u>20,620</u>	<u>17,062</u>
Non-marketable securities:							
The Korea Economic Daily	974	178,881	0.96	1,952	1,912	974	806
Erae-automotive system Co., Ltd.	28,678	1,835,520	7.70	9,178	26,725	26,725	22,114
Hanil Daewoo Cement Mfg Co., Ltd.	-	300,000	15.00	1,500	(1,384)	-	-
Shinpoong Daewoo Pharma Co., Ltd.	343	-	3.42	343	333	343	284
CJ Philippines INC.	349	109,200	10.00	349	3,182	349	289
POSCO-Malaysia Sdn. Bhd.	7,577	24,128,000	13.63	7,905	(2,252)	7,577	6,270
CES Co., Ltd.	600	156,000	5.34	600	600	600	496
Central Corporation	8,676	100,474	10.89	1,859	10,157	10,157	8,405
Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No. 1	86	-	2.13	263	103	103	85
Hanmi ADM Co., Ltd.	1,000	10,000	16.67	1,000	1,516	1,000	827
Dongjin Vietnam Co., Ltd.	803	20,000	10.00	803	130	803	664
POSCO Assan TST Steel Industry A.S.	15,460	24,096,526	10.00	15,460	(6,431)	15,460	12,793
ADM21	2	-	-	-	-	-	-
Hunchun Pohang Hyundai International Logistics Complex Development Co., Ltd.	10,732	-	10.00	10,732	9,766	10,732	8,881
TES MI S.R.O.	523	-	3.00	523	653	523	433
POSCO-ITPC S.P.A	781	-	10.00	781	696	781	646
Jilin KDAC Co., Ltd.	176	-	7.00	176	77	176	146
Miju Steel Mfg Co., Ltd.	182	909,391	1.49	182	(277)	-	-
KG Power Co., Ltd.	-	1,457,847	6.69	45	-	-	-
S&S Metal Co., Ltd.	-	26,390	10.44	1,000	771	1,000	827
Erae Automotive Systems Mexico	-	-	19.00	478	(1,064)	478	396
POSCO Agricultural Products Export Fund	-	-	10.00	300	300	300	248
Others	6,193			20,222	9,976	9,976	8,255
	<u>83,135</u>			<u>75,651</u>	<u>55,489</u>	<u>88,057</u>	<u>72,865</u>
	<u>₩ 105,585</u>			<u>₩ 94,081</u>	<u>₩ 76,109</u>	<u>₩ 108,677</u>	<u>\$ 89,927</u>

Investments in marketable securities, Maruichi Steel Tube Ltd., TK-Chemical Co., Ltd. and IQ Power Licensing AG were stated at fair market value as at December 31, 2016. Investments in Erae Automotive Systems Co., Ltd. and Central Corporation were stated at fair value amounting to ₩14,560 (\$12,048) and ₩101,093 (\$83,652) per share, respectively, by using the discounted cash flow method under the income approach. Investment in Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No. 1 was valued at net asset value (NAV) as at December 31, 2016. The resulting unrealized gains arising from fair value adjustments on available-for-sale financial assets amounting to ₩21,129 million (\$17,484 thousand) were recorded in accumulated other comprehensive income, net of deferred income tax effect (liability) of ₩6,746 million (\$5,582 thousand).

Available-for-sales financial assets other than marketable securities and investment in Erae Automotive Systems Co., Ltd., Central Corporation and Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No. 1 are recorded at cost as these securities do not have quoted markets prices in an active market and the fair value of those securities could not be measured reliably.

6.1 Restricted deposits

As at December 31, 2016 and 2015, deposits in financial institutions amounting to ₩17,084 million (\$14,137 thousand) and ₩9,209 million (\$7,858 thousand) are restricted in use in accordance with relevant financial agreements, respectively.

7. Other assets

Other current and non-current assets as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Other current assets:			
Advance payments	₩ 104,234	₩ 181,712	\$ 150,361
Allowance for doubtful accounts	(8,873)	(5,147)	(4,259)
Prepaid expenses	4,305	4,424	3,661
Allowance for doubtful accounts	-	(3,314)	(2,742)
	99,666	177,675	147,021
Other non-current assets:			
Long-term prepaid expenses	577	7	6
	₩ 100,243	₩ 177,682	\$ 147,027

8. Inventories

Inventories as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Merchandise	₩ 481,672	₩ 531,235	\$ 439,582
Valuation allowance	(10,922)	(10,500)	(8,688)
Finished goods	14,027	6,149	5,088
Valuation allowance	(331)	-	-
Work-in-process	2,365	2,574	2,130
Raw materials	18,017	11,474	9,494
Valuation allowance	(698)	-	-
Supplies	1,558	1,748	1,446
Materials-in-transit	265,463	223,895	185,267
Valuation allowance	(607)	-	-
	₩ 770,544	₩ 766,575	\$ 634,319

The loss on valuation of inventories and the reversal of loss on valuation of inventories, which were recorded as costs of sales in 2016, amounted to ₩1,298 million (\$1,074 thousand) and ₩2,734 million (\$2,262 thousand), respectively. The losses on valuation amounting to ₩8,344 million (\$7,119 thousand) were recognized for the year ended December 31, 2015.

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9. Investments in associates

Investments in associates as at December 31, 2015 and 2016 are as follows:

	Korean won in millions						U. S. dollar in
	2015		Equity owner- ship (%)	2016		2016	
	Book value	Number of shares		Acquisition cost	Proportionate net asset value	Book value	Book value
Shanghai Lansheng Daewoo Corp.	₩ 2,284	-	49.00	₩ 4,828	₩ 2,001	₩ 1,904	\$ 1,576
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	2,249	-	49.00	299	2,035	2,035	1,684
Korea LNG Ltd.	51,547	2,400	20.00	-	56,737	56,737	46,948
General Medicines Co., Ltd.	5,634	9,702	33.00	736	6,962	6,895	5,705
POSCO IJPC	1,553	5,603,939	20.00	8,056	3,153	2,823	2,336
DMSA/AMSA(*1),(4)	64,125	-	4.00	242,674	69,104	69,149	57,219
POSCO Mexico Processing Center Holding LLC	9,633	-	26.70	14,004	13,400	11,513	9,527
POSCO ESDC Ltd.	1,266	-	20.00	757	1,373	1,373	1,136
POSCO-AAPC(*2)	4,633	-	-	-	-	-	-
KG Power (M) Sdn. Bhd.	-	3,000,000	20.00	1,062	(1,205)	-	-
Global Komsco Daewoo LLC	441	-	35.00	4,445	924	916	758
South-East Asia Gas Pipeline Company Ltd.	223,060	50,082	25.04	150,779	216,787	216,787	179,385
Blue Ocean Recovery PEF No. 1	37,341	333	27.52	33,300	37,656	37,656	31,159
Korea Siberia Wood Cjsc	-	1,000	50.00	3,472	(1,977)	-	-
Daewoo Global Development Pte. Ltd.	11,936	15,000,000	30.00	15,683	13,836	13,836	11,449
VNS-Daewoo Co., Ltd.	2,584	-	40.00	4,228	1,847	1,847	1,528
SPH Co., Ltd.	375	100,000	50.00	500	272	272	225
PT. Batutua Tembaga Raya	14,986	128,285	24.10	14,785	4,599	22,327	18,475
Yulchon Mexico S.A. De C.V.(*1)	1,326	18,267,000	10.00	1,349	868	868	718
HyunSon Engineering & Construction(*1)	85	-	4.90	97	54	54	45
	435,058			501,054	428,426	446,992	369,873
Government grants (*3)	-			(10,986)	-	-	-
	₩ 435,058			₩ 490,068	₩ 428,426	₩ 446,992	\$ 369,873

(*1) These securities are classified as investments in an associate even though the Group's equity ownership is below 20%, as the Group is able to exercise significant influence on the investee.

(*2) POSCO-AAPC has been reclassified as available-for-sale securities due to a decline in its ownership interest during the period.

(*3) Differences between the nominal amount and the fair value of the borrowings related to the acquisition of interest in DMSA/AMSA were measured at initial recognition.

(*4) The Company invested in the Ambatovy Nickel Project (DMSA / ASMA) in Madagascar through Korea Ambatovy Consortium (KAC), which is composed of Korea Resources Corporation (KORES) and STX Co., Ltd. As withdrawal from KAC was approved at the Company's Board of Directors' meeting on July 28, 2016, the Company has officially notified the withdrawal from KAC to participating companies including KORES in written form, and also requested KAC to resolve all legal issues. The Company also requested for arbitration to Korean Commercial Arbitration Board on November 4, 2016, in connection with the withdrawal notice, settlement of shares, compensation for damages and others.

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9. Investments in associates (cont'd)

Changes in the carrying amount of associates for the years ended 2015 and 2016 are as follows (Korean won in millions):

	2015			
	Beginning balance	Share of the associate's profit (loss)	Other changes(*)	Ending balance
Shanghai Lansheng Daewoo Corp.	₩ 2,375	₩ (155)	₩ 64	₩ 2,284
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	1,972	239	38	2,249
Korea LNG Ltd.	78,707	12,361	(39,521)	51,547
General Medicines Co., Ltd.	4,548	1,470	(384)	5,634
POSCO IJPC	3,094	(1,700)	159	1,553
DMSA/AMSA	112,349	(124,994)	76,770	64,125
POSCO Mexico Processing Center Holding LLC	9,412	(449)	670	9,633
POSCO ESDC Ltd.	1,300	121	(155)	1,266
POSCO-AAPC	4,159	190	284	4,633
KG Power (M) SDN. Bhd.	-	-	-	-
Global Komsco Daewoo LLC	-	310	131	441
South-East Asia Gas Pipeline Company Ltd.	172,804	55,140	(4,884)	223,060
Blue Ocean Recovery PEF No. 1	31,272	7,536	(1,467)	37,341
Korea Siberia Wood CJSC	-	-	-	-
Daewoo Global Development Pte. Ltd.	12,485	(1,328)	779	11,936
VNS-Daewoo Co., Ltd.	4,222	(1,814)	176	2,584
SPH Co., Ltd.	495	(120)	-	375
PT. Batutua Tembaga Raya	14,276	-	710	14,986
Yulchon Mexico S.A. De C.V.	-	99	1,227	1,326
HyunSon Engineering & Construction	-	-	85	85
	<u>₩ 453,470</u>	<u>₩ (53,094)</u>	<u>₩ 34,682</u>	<u>₩ 435,058</u>

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9. Investments in associates (cont'd)

	2016			
	Beginning balance	Share of the associate's profit (loss)	Other changes(*)	Ending balance
Shanghai Lansheng Daewoo Corp.	₩ 2,284	₩ (220)	₩ (160)	₩ 1,904
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	2,249	(123)	(91)	2,035
Korea LNG Ltd.	51,547	6,392	(1,202)	56,737
General Medicines Co., Ltd.	5,634	1,953	(692)	6,895
POSCO IJPC	1,553	1,171	99	2,823
DMSA/AMSA	64,125	(20,756)	25,780	69,149
POSCO Mexico Processing Center Holding LLC	9,633	917	963	11,513
POSCO ESDC Ltd.	1,266	121	(14)	1,373
POSCO-AAPC	4,633	251	(4,884)	-
KG Power (M) SDN. Bhd.	-	-	-	-
Global Komsco Daewoo LLC	441	442	33	916
South-East Asia Gas Pipeline Company Ltd.	223,060	46,856	(53,129)	216,787
Blue Ocean Recovery PEF No. 1	37,341	643	(328)	37,656
Daewoo Global Development Pte. Ltd.	11,936	1,466	434	13,836
VNS-Daewoo Co., Ltd.	2,584	(761)	24	1,847
SPH Co., Ltd.	375	(103)	-	272
PT. Batutua Tembaga Raya	14,986	-	7,341	22,327
Yulchon Mexico S.A. De C.V.	1,326	(297)	(161)	868
HyunSon Engineering & Construction	85	(21)	(10)	54
	₩ 435,058	₩ 37,931	₩ (25,997)	₩ 446,992
U. S. dollar in thousands (Note 2)	\$ 359,997	\$ 31,389	\$ (21,513)	\$ 369,873

(*) Other changes represent the changes in investments in associates due to acquisitions, disposals, dividends received and changes in accumulated other comprehensive income.

Details of unrealized gain or loss from intercompany transactions reflected in share of profit in associates are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Shanghai Lansheng Daewoo Corp.	₩ 65	₩ 14	\$ 12
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	3	-	-
General Medicines Co., Ltd.	1	(22)	(18)
Global Komsco Daewoo LLC	(24)	(8)	(7)
POSCO IJPC	(106)	(8)	(7)
POSCO Mexico Processing Center Holding. LLC.	(1,121)	(328)	(271)
VNS-Daewoo Co., Ltd.	(277)	277	229
POSCO-AAPC	(79)	-	-
DMSA/AMSA	-	43	36
	₩ (1,538)	₩ (32)	\$ (26)

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9. Investments in associates (cont'd)

The summarized financial information of major associates as at and for the year ended December 31, 2016 is as follows (Korean won in millions):

	Korea LNG Ltd.	DMSA/AMSA	South-East Asia Gas Pipeline Co.,Ltd.
Current assets	₩ 20,442	₩ 531,318	₩ 373,072
Non-current assets	282,947	6,038,854	1,798,617
Current liabilities	19,663	320,898	1,184,272
Non-current liabilities	41	4,521,662	121,670
Revenue	33,035	579,388	491,011
Net profit (loss)	31,962	(519,969)	187,114
Other comprehensive income	17,094	-	-
Total comprehensive income	49,056	(519,969)	187,114
Dividend received from associates	6,342	-	59,717

The summarized financial information of other associates as at and for the year ended December 31, 2016 is as follows (Korean won in millions):

	Total assets	Total liabilities	Sales	Net profit (loss)
Shanghai Lansheng Daewoo Corp.	₩ 22,345	₩ 18,262	₩ 24,905	₩ (448)
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	61,870	57,716	141,460	(252)
General Medicines Co., Ltd.	26,659	5,561	28,522	5,986
POSCO IJPC	70,190	54,424	87,200	5,895
POSCO Mexico Processing Center Holding LLC	287,498	237,312	401,579	4,353
POSCO ESDC Ltd.	7,852	985	14,029	607
KG Power(M) Sdn. Bhd.	6,690	12,717	-	-
Global Komsco Daewoo LLC	42,463	39,823	20,947	1,286
Blue Ocean Recovery PEF No. 1	357,723	220,895	456,311	2,335
Korea Siberia Wood CJSC	1,853	5,807	1,521	(217)
Daewoo Global Development Pte. Ltd.	249,826	203,707	1,165	4,888
VNS-Daewoo Co., Ltd.	4,830	213	18,768	(2,595)
SPH Co., Ltd.	111,902	111,358	-	(207)
PT. Batutua Tembaga Raya	351,119	332,037	-	-
Yulchon Mexico S.A. De C.V.	23,623	14,558	188	(2,975)
HyunSon Engineering & Construction	1,363	262	-	(434)

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10. Property, plant and equipment

Property, plant and equipment as at December 31, 2015 and 2016 is as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Acquisition cost	₩ 956,355	₩ 969,705	\$ 802,403
Accumulated depreciation	(330,435)	(301,130)	(249,177)
Accumulated impairment loss	-	(2,288)	(1,893)
Government grants	(307)	(200)	(165)
Book value	₩ 625,613	₩ 666,087	\$ 551,168

Changes in the acquisition cost of property, plant and equipment for the year ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015				
	Beginning balance	Additions	Disposals	Transfer and others	Ending balance
Land	₩ 16,720	₩ 2	₩ -	₩ (61)	₩ 16,661
Buildings	128,600	2,333	-	(1,998)	128,935
Machinery	587,762	4,875	(497)	6,055	598,195
Others	66,441	8,408	(7,814)	(2,049)	64,986
Construction -in-progress	91,005	83,648	(204)	(26,871)	147,578
	₩ 890,528	₩ 99,266	₩ (8,515)	₩ (24,924)	₩ 956,355

	2016					
	Beginning balance	Additions	Disposals	Change in scope of consolidation	Transfer and others	Ending balance
Land	₩ 16,661	₩ 41	₩ -	₩ -	₩ 1,912	₩ 18,614
Buildings	128,935	4	(186)	(14,006)	11,998	126,745
Machinery	598,195	2,292	(1,622)	(76,022)	17,169	540,012
Others	64,986	4,214	(3,712)	(2,287)	(1,756)	61,445
Construction -in-progress	147,578	89,042	(264)	-	(13,467)	222,889
	₩ 956,355	₩ 95,593	₩ (5,784)	₩ (92,315)	₩ 15,856	₩ 969,705
U. S. dollars in thousands (Note 2)	\$ 791,357	\$ 79,101	\$ (4,786)	\$ (76,388)	\$ 13,119	\$ 802,403

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

Changes in accumulated depreciation of property, plant and equipment for the year ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015					Ending balance
	Beginning balance	Depreciation	Disposals	Transfer and others		
Buildings	₩ 31,271	₩ 3,197	₩ -	₩ 124	₩	₩ 34,592
Machinery	229,835	23,261	(309)	5,248		258,035
Others	46,893	6,925	(7,481)	(8,529)		37,808
	₩ 307,999	₩ 33,383	₩ (7,790)	₩ (3,157)	₩	₩ 330,435

	2016					Ending balance
	Beginning balance	Depreciation	Disposals	Change in scope of consolidation	Transfer and others	
Buildings	₩ 34,592	₩ 1,942	₩ (85)	₩ (6,943)	₩ 2,539	₩ 32,045
Machinery	258,035	18,247	(696)	(56,237)	8,904	228,253
Others	37,808	10,655	(3,279)	(1,260)	(3,092)	40,832
	₩ 330,435	₩ 30,844	₩ (4,060)	₩ (64,440)	₩ 8,351	₩ 301,130
U. S. dollars in thousands (Note 2)	\$ 273,426	\$ 25,522	\$ (3,359)	\$ (53,322)	\$ 6,910	\$ 249,177

Changes in accumulated impairment loss of property, plant and equipment for the year ended December 31, 2016 are as follows (Korean won in millions):

	2016					Ending balance
	Beginning balance	Impairment	Others	Change in scope of consolidation		
Buildings	₩ -	₩ 7,539	₩ 143	₩ (6,268)	₩	₩ 1,414
Machinery	-	18,343	88	(17,557)		874
Others	-	912	-	(912)		-
	₩ -	₩ 26,794	₩ 231	₩ (24,737)	₩	₩ 2,288
U. S. dollar in thousands (Note 2)	\$ -	\$ 22,171	\$ 191	\$ (20,469)	\$	\$ 1,893

Changes in government grants of property, plant and equipment for the year ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015				Ending balance
	Beginning balance	Received	Depreciation		
Equipment	₩ -	₩ 369	₩ (77)	₩	₩ 292
Machinery	16	-	(1)		15
	₩ 16	₩ 369	₩ (78)	₩	₩ 307

	2016				Ending balance
	Beginning balance	Depreciation	Change in scope of consolidation		
Equipment	₩ 292	₩ (92)	₩ -	₩	₩ 200
Machinery	15	-	(15)		-
	₩ 307	₩ (92)	₩ (15)	₩	₩ 200
U. S. dollar in thousands (Note 2)	\$ 253	\$ (76)	\$ (12)	\$	\$ 165

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

Property, plant and equipment pledged as collateral as at December 31, 2015 and 2016 are as follows (U.S. dollar in thousands):

Provider	Pledged assets	Creditor	2015	2016
Daewoo Textile LLC	Machinery	Asia Alliance Bank and Others	\$ 9,115	\$ 9,813
	Buildings	Infin Bank and Others	\$ 5,000	\$ 11,250

11. Intangible assets

Changes in the net book value of intangible assets for the years ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015						
	Beginning balance	Additions	Disposals and transfer	Amortization	Impairment	Others	Ending balance
Goodwill	₩ 13,968	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 13,968
Industrial proprietary rights	2,567	193	-	(406)	-	(468)	1,886
Mining rights	1,606,103	104,334	-	(126,321)	(16,736)	(7,872)	1,559,508
Exploration and evaluation assets	93,096	61,427	-	-	(17)	(2,243)	152,263
Development assets	1,221	1,685	-	-	-	142	3,048
Membership	11,103	146	(467)	(10)	(350)	37	10,459
Software	-	688	(143)	(2,511)	-	5,461	3,495
	<u>₩ 1,728,058</u>	<u>₩ 168,473</u>	<u>₩ (610)</u>	<u>₩ (129,248)</u>	<u>₩ (17,103)</u>	<u>₩ (4,943)</u>	<u>₩ 1,744,627</u>
	2016						
	Beginning balance	Additions	Disposals and transfer	Amortization	Impairment	Others	Ending balance
Goodwill	₩ 13,968	₩ -	₩ -	₩ -	₩ (779)	₩ -	₩ 13,189
Industrial proprietary rights	1,886	684	-	(539)	(936)	(315)	780
Mining rights	1,559,508	16,808	-	(130,452)	(15,850)	38,938	1,468,952
Exploration and evaluation assets	152,263	45,524	-	(2)	(3,290)	(31,108)	163,387
Development assets	3,048	10,558	-	-	-	(9,156)	4,450
Membership	10,459	51	(117)	(7)	(1,000)	(3)	9,383
Software	3,495	41	-	(1,734)	-	913	2,715
	<u>₩ 1,744,627</u>	<u>₩ 73,666</u>	<u>₩ (117)</u>	<u>₩ (132,734)</u>	<u>₩ (21,855)</u>	<u>₩ (731)</u>	<u>₩ 1,662,856</u>
U. S. dollar in thousands (Note 2)	<u>\$ 1,443,630</u>	<u>\$ 60,957</u>	<u>\$ (97)</u>	<u>\$ (109,834)</u>	<u>\$ (18,084)</u>	<u>\$ (605)</u>	<u>\$ 1,375,967</u>

11.1 Joint operation

Mining rights and machinery include the Group's proportionate share of the jointly controlled assets. As at December 31, 2016, a list of significant joint operation is as follows:

	Activities	Equity interest (%)	Location
Myanmar A-1/A-3 area	Development and gas production for gas area	51.00	Myanmar
Offshore midstream	Gas transmission facilities	51.00	Myanmar

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12. Investment properties

Investment properties as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Acquisition cost	₩ 168,031	₩ 168,031	\$ 139,041
Accumulated depreciation	(4,119)	(7,027)	(5,815)
Book value	₩ 163,912	₩ 161,004	\$ 133,226

Changes in acquisition cost of investment properties for the years ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015		
	Beginning balance	Additions	Ending balance
Land	₩ 51,703	₩ -	₩ 51,703
Building	116,250	78	116,328
	₩ 167,953	₩ 78	₩ 168,031
	2016		
	Beginning balance	Additions	Ending balance
Land	₩ 51,703	₩ -	₩ 51,703
Building	116,328	-	116,328
	₩ 168,031	₩ -	₩ 168,031
U. S. dollar in thousands (Note 2)	\$ 139,041	\$ -	\$ 139,041

Changes in accumulated depreciation on investment properties for the years ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015		
	Beginning balance	Depreciation	Ending balance
Building	₩ 1,211	₩ 2,908	₩ 4,119
	₩ 1,211	₩ 2,908	₩ 4,119
	2016		
	Beginning balance	Depreciation	Ending balance
Building	₩ 4,119	₩ 2,908	₩ 7,027
	₩ 4,119	₩ 2,908	₩ 7,027
U. S. dollar in thousands (Note 2)	\$ 3,409	\$ 2,406	\$ 5,815

The fair value of investment properties amounted to ₩170,285 million (\$140,906 thousand) as at December 31, 2016 (₩168,679 million (\$143,924 thousand) as at December 31, 2015).

12. Investment properties (cont'd)

Income and expense arising from investment properties for the years ended December 31, 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Rental income	₩ 4,191	₩ 4,587	\$ 3,796
Rental expense	(5,158)	(3,321)	(2,748)
	₩ (967)	₩ 1,266	\$ 1,048

12.1 Joint arrangement

The Group owns Songdo Northeast Asia Trade Tower, located in Yeonsu-gu, Incheon, in form of a joint arrangement. As at the end of reporting period, the Group owns 60% of the real estate, which is classified as property, plant and equipment and investment properties. The Group classifies these joint arrangements as joint operations. Rental income and expense from the joint operations are recognized as income and expense in proportion to the Group's shares.

13. Trade and other payables

Trade and other payables as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Current:			
Trade payables	₩ 1,017,445	₩ 1,614,551	\$ 1,335,996
Other payables	209,070	176,258	145,849
Accrued expenses	24,905	17,545	14,518
Guarantee deposits received	680	62	51
	1,252,100	1,808,416	1,496,414
Non-current:			
Long-term other payables	12,505	4,671	3,865
Long-term accrued expenses	94	58	48
Long-term guarantee deposits received	1,630	2,052	1,698
Financial guarantee liabilities	18,236	21,532	17,817
	32,465	28,313	23,428
	₩ 1,284,565	₩ 1,836,729	\$ 1,519,842

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14. Borrowings

Borrowings as at December 31, 2015 and 2016 are as follows:

	Creditor	Annual interest rates as at Dec. 31, 2016	The longest maturity	Korean won in millions		U. S. dollar in thousands (Note 2)
				2015	2016	2016
Current borrowings:						
Short-term borrowings:						
Banker's usance and others	Woori Bank and others	1.40%~2.12%	-	₩ 1,787,262	₩ 1,401,759	\$ 1,159,917
Subsidiaries' borrowings				252,603	373,799	309,308
				<u>2,039,865</u>	<u>1,775,558</u>	<u>1,469,225</u>
Current-portion of long-term borrowings:						
Work-out debt from creditor council	AKA Bank	6M Euribor +0.45%	2017.12.29	6,201	6,456	5,342
Energy special account financing loan	Korea Resources Corporation	3 year government bond yield -2.25% and others	2017.12.31	-	5,930	4,907
Forgivable borrowings	Korea National Oil Corporation and others	3 year government bond yield -2.25% and others	2017.12.31	-	25,760	21,316
Others	Korea EXIM Bank and others	3M Libor +2.2% and others	2017.12.31	40,903	32,267	26,700
Subsidiaries' borrowings				10,695	23,839	19,726
Finance lease liabilities				-	10,593	8,765
Less: present value discount				(542)	(1,380)	(1,142)
				<u>57,257</u>	<u>103,465</u>	<u>85,614</u>
				<u>2,097,122</u>	<u>1,879,023</u>	<u>1,554,839</u>
Non-current borrowings:						
Korean won denominated borrowings:						
Energy special account financing loan	Korea Resources Corporation	3 year government bond yield -2.25% and others	2027.12.15	12,731	10,779	8,919
Forgivable borrowings	Korea Resources Corporation	3 year government bond yield -2.25%	Undecided	2,934	2,358	1,951
Other borrowings	Korea Rural Community Corporation	2.00%	2029.12.12	27,500	27,500	22,755
				<u>43,165</u>	<u>40,637</u>	<u>33,626</u>
Foreign-currency denominated borrowings:						
Work-out debt from Creditor Council	AKA Bank	-	-	6,522	-	-
Energy special account financing loan	Korea Resources Corporation	3 year government bond yield -2.25% and others	2027.12.15	39,264	31,352	25,943
Forgivable borrowings	Korea National Oil Corporation and others	3 year government bond yield -2.25% and others	Undecided	259,566	182,449	150,971
Other foreign currency borrowings	Korea EXIM Bank and others	3M Libor+1% and others	2018.08.31	234,048	205,445	170,000
Subsidiaries' borrowings				96,414	130,981	108,383
Finance lease liabilities				23,142	4,454	3,686
				<u>658,956</u>	<u>554,681</u>	<u>458,983</u>
				<u>702,121</u>	<u>595,318</u>	<u>492,609</u>
Less: present value discount				(5,710)	(3,074)	(2,544)
				<u>696,411</u>	<u>592,244</u>	<u>490,065</u>
				<u>₩ 2,793,533</u>	<u>₩ 2,471,267</u>	<u>\$ 2,044,904</u>

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14. Borrowings (cont'd)

Details of bonds as at December 31, 2015 and 2016 are as follows:

	Annual interest rates as at Dec. 31, 2016	Maturity	Korean won in millions		U. S. dollar in thousands (Note 2)
			2015	2016	2016
Current-portion of bonds:					
7th unsecured bond	-	-	₩ 200,000	₩ -	\$ -
8-1st unsecured bond	-	-	150,000	-	-
10-1st unsecured bond	3.00%	2017.07.02	-	180,000	148,945
	3M SGD				
12th privately placed bond	SOR+0.75%	2017.10.27	-	115,175	95,304
			350,000	295,175	244,249
Less: discount on bonds			(201)	(442)	(366)
			349,799	294,733	243,883
Non-current bonds:					
8-2nd unsecured bond	3.09%	2018.03.08	150,000	150,000	124,121
10-1st unsecured bond	-	-	180,000	-	-
10-2nd unsecured bond	3.26%	2019.07.02	220,000	220,000	182,043
	3M Libor +				
11th privately placed bond	0.9%	2018.10.16	234,400	241,700	200,000
12th privately placed bond	-	-	114,276	-	-
13th public offered bond	2.02%	2019.07.14	-	150,000	124,121
			898,676	761,700	630,285
Less: discount on bonds			(3,713)	(2,223)	(1,839)
			894,963	759,477	628,446
			₩ 1,244,762	₩ 1,054,210	\$ 872,329

15. Other liabilities

Other liabilities as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Current:			
Advance received	₩ 76,942	₩ 177,750	\$ 147,083
Withholdings	17,943	25,903	21,434
	94,885	203,653	168,517
Non-current:			
Long-term withholdings	584	1,635	1,353
	₩ 95,469	₩ 205,288	\$ 169,870

16. Severance and retirement benefit liability

The Group operates a defined benefit pension plan for its employees and uses the projected unit credit method in the actuarial valuation of plan assets and the defined benefit obligation.

16.1 Principal assumptions used in actuarial valuation

	2015	2016
Discount rate (%)	2.50%	2.54%
Future salary growth rate (%)	5.00%	5.00%
Expected retirement rate (%)	7.20%	8.50%

16.2 Sensitivity analysis

16.2.1 Discount rate

	1% point decrease	1% point increase
Impact on the defined benefit obligation	₩ 8,147	₩ (6,996)
Rate of change	9.33%	(8.02%)

16.2.2 Future salary growth rate

	1% point decrease	1% point increase
Impact on the defined benefit obligation	₩ (6,912)	₩ 7,869
Rate of change	(7.92%)	9.02%

16.3 Net benefit expense recognized in profit or loss

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Current service cost	₩ 11,617	₩ 14,393	\$ 11,910
Net interest cost	792	551	456
	₩ 12,409	₩ 14,944	\$ 12,366

16.4 Amounts recognized in the statement of financial position

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Present value of defined benefit obligation	₩ 84,436	₩ 88,804	\$ 73,483
Fair value of plan assets	(68,169)	(82,792)	(68,508)
	₩ 16,267	₩ 6,012	\$ 4,975

16.5 Changes in the present value of the defined benefit obligation

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Beginning balance	₩ 78,511	₩ 84,436	\$ 69,868
Current service cost	11,617	14,393	11,910
Interest cost	2,266	2,020	1,671
Benefits paid	(8,143)	(14,421)	(11,933)
Re-measurement gain (loss) in OCI:			
Actuarial changes arising from changes in demographic assumptions	(824)	-	-
Actuarial changes arising from changes in financial assumptions	1,574	(244)	(202)
Others	(715)	2,413	1,997
	35	2,169	1,795
Transfer from related parties	-	17	15
Foreign currency translation	150	190	157
Ending balance	₩ 84,436	₩ 88,804	\$ 73,483

16.6 Changes in the fair value of plan assets

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Beginning balance	₩ 56,581	₩ 68,169	\$ 56,407
Contribution by employer	18,000	24,995	20,682
Interest income	1,474	1,469	1,216
Benefits paid	(8,114)	(12,062)	(9,981)
Re-measurement gain (loss) in OCI:			
Actuarial changes arising from changes in financial assumptions	228	204	169
	228	204	169
Transfer from related parties	-	17	15
Ending balance	₩ 68,169	₩ 82,792	\$ 68,508

16.7 Re-measurement gain (loss) in OCI

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Re-measurement of defined benefit obligation	₩ 35	₩ (2,169)	\$ (1,795)
Re-measurement of plan assets	228	204	169
	263	(1,965)	(1,626)
Income tax effect	(56)	463	383
Other comprehensive income	₩ 207	₩ (1,502)	\$ (1,243)

16.8 Analysis of defined benefit plans on future cash flows

The estimated contribution for the fiscal year ending December 31, 2017 amounted to ₩15,114 million. The maturity analysis of the Group's un-discounted pension benefit payments at the end of the reporting period is as follows:

	Korean won in millions					Total
	Less than 1 year	1 year to 2 years	2 years to 5 years	Over 5 years		
Amount to be paid ₩	4,519	₩ 4,905	₩ 19,724	₩ 149,008	₩	178,156

The weighted average maturity of the defined benefit obligations of the Group is 10.32 years.

17. Provisions

Provisions as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Provision for contingencies (see Note 18)	₩ 54,494	₩ 76,932	\$ 63,659
Provision for restoration	5,409	11,526	9,538
	₩ 59,903	₩ 88,458	\$ 73,197

Changes in provisions for the year ended December 31, 2016 are as follows:

	Korean won in millions			U. S. dollar in thousands (Note 2)
	Provision for contingencies	Provision for restoration	Total	Total
Beginning balance	₩ 54,494	₩ 5,409	₩ 59,903	\$ 49,569
Contribution	32,592	440	33,032	27,333
Used	(10,816)	-	(10,816)	(8,950)
Transfer	-	5,419	5,419	4,484
Foreign currency translation	662	258	920	761
Ending balance	₩ 76,932	₩ 11,526	₩ 88,458	\$ 73,197

18. Commitments and contingencies

18.1 Provision for contingencies

Changes in provision for contingencies for the year ended December 31, 2016 are as follows (Korean won in millions):

	Provision					
	Beginning balance	Increase	Decrease	Foreign currency translation	Ending balance	Principal debt amount
Creditors of Daewoo Corp.	₩ 26,800	₩ 777	₩ -	₩ 691	₩ 28,268	₩ 257,405
Legal proceedings provision	13,692	476	(10,816)	(29)	3,323	-
Other onerous contracts provision	14,002	31,339	-	-	45,341	120,346
	<u>₩ 54,494</u>	<u>₩ 32,592</u>	<u>₩ (10,816)</u>	<u>₩ 662</u>	<u>₩ 76,932</u>	<u>₩ 377,751</u>
U.S. dollar in thousands (Note 2)	<u>\$ 45,092</u>	<u>\$ 26,969</u>	<u>\$ (8,950)</u>	<u>\$ 548</u>	<u>\$ 63,659</u>	<u>\$ 312,578</u>

18.1.1 Contingent liabilities carried over from Daewoo Corporation prior to the spin-off

On July 22, 2000, the shareholders of Daewoo Corporation approved the spin-off of two business segments which were established as separate entities, Daewoo International Corporation and Daewoo Engineering & Construction Co., Ltd. ("Daewoo E&C"), with the former representing the international trading division and the latter representing the construction division. Certain creditors approved the spin-off while others disapproved. Certain of Daewoo Corporation's liabilities were transferred to the Company and to Daewoo E&C, which resulted in the Company becoming a primary debtor or guarantor for such transferred liabilities.

Regarding the probable claims on liabilities from both consenting and dissenting creditors, the Group estimated ₩28,268 million (\$23,391 thousand) as the amount of provision on the basis of the settlement agreement with some creditors and other information.

The above total amount of provision for contingencies related to creditors of Daewoo Corporation was proportionately allocated between the Company and Daewoo E&C.

In May 2002, Industrial Development Bank of India ("IDBI"), a creditor of Daewoo Motors India Ltd. ("DMIL"), to which Daewoo Corporation provided a payment guarantee, filed a petition with the court of Delhi/Mumbai against DMIL to exercise its rights to dispose of DMIL's assets for settlement of the related obligations. Accordingly, the Group estimated the probable loss of the pending petition above and reflected the amount in provisions for contingencies as at December 31, 2016.

Further, Daewoo Corporation filed for bankruptcy with the Seoul Central District Court on May 25, 2006 and received the adjudication of bankruptcy on June 16, 2006. As at December 31, 2016, the bankruptcy proceedings of Daewoo Corporation are in progress.

18.1.2 Provision for litigation and others

The Group recognized probable outflow of resources amounting to ₩48,664 million (\$40,268 thousand) as provision for contingencies in connection with lawsuits against the Group and Canada Baptiste project as at December 31, 2016 (see related Notes below).

18.2 Pending litigations

As at the reporting date, the Group is a defendant in pending lawsuits involving 38 claims (domestic: 10 claims and overseas: 28 claims) The total amount of the lawsuits, except one case that the outcome of the pending litigation cannot be reasonably estimated, is ₩5,802 million, USD 15,644 thousand, EUR 2,667 thousand, INR 4,469,396 thousand, CAD 79,000 thousand, PKR 124,775 thousand and BRL 1,264 thousand.

The Group is involved in 33 pending lawsuits as a plaintiff as at December 31, 2016.

The ultimate outcome of these lawsuits could not be determined. Therefore, the Group has not established potential liabilities that may arise as a result of the above litigations as at December 31, 2016 other than lawsuits for which provision for contingencies is recognized.

18.3 Credit facilities

As at December 31, 2016, the Group has letter of credit facilities ("L/C") with Woori Bank and others, document against acceptance facilities ("D/A") and other trading facilities as follows (U.S. dollar in thousands and Korean won in millions):

	Bank	Credit line amount	Outstanding balance
Local L/C	Woori Bank and others	\$ 306,599	\$ 243,183
L/C	Woori Bank and others	\$ 1,535,171	\$ 1,088,621
D/A	Woori Bank and others	\$ 1,707,265	\$ 465,379
Credit line in foreign currency	Woori Bank and others	\$ 470,000	\$ 304,061
P-Bond and others	Korea EXIM Bank and others	\$ 684,050	\$ 467,341
Overdraft and others	Woori Bank and others	₩ 9,000	₩ -

18.4 Collateral

The Group has pledged 35 blank promissory notes, 16 blank checks and notes in aggregate of JPY 556,720 thousand as collateral to Korea National Oil Corporation and others for the contract performance guarantees and other purpose as at December 31, 2016.

18.5 Derivatives

The Group entered into currency forwards contracts and commodity futures contracts with financial institutions to hedge against foreign exchange risks and inventory price risks, and details on the maximum credit line amounts are as follows (U.S. dollar in thousands and Korean won in millions):

Contract	Bank	Derivative credit lines	Details
Currency forwards	Woori Bank	\$ 15,000	Limit of loss
	Kookmin Bank	₩ 33,600	Limit of loss
	Suhyup Bank	₩ 10,000	Limit of loss
	Citibank Korea	\$ 50,000	Limit of risk transaction
	SC Bank Korea	\$ 120,000	Limit of transaction
	HSBC	\$ 60,000	Limit of risk transaction
	UOB(*1)	\$ 200,000	Limit of transaction
	Deutsch Bank	\$ 13,000	Limit of risk transaction
	Credit Agricole(*1)	\$ 50,000	Limit of risk transaction
	KEB Hana Bank	\$ 60,000	Limit of loss
	ANZ Bank	\$ 10,000	Limit of risk transaction
	Societe General	\$ 42,000	Limit of risk transaction
	SMBC	\$ 200,000	Limit of transaction
	Industrial & Commercial Bank of China	\$ 50,000	Limit of risk transaction
	Korea Development Bank	₩ 30,000	Limit of risk transaction
	ING Bank	\$ 34,000	Limit of risk transaction
	Mizuho Bank	\$ 20,000	Limit of loss

18.5 Derivatives (cont'd)

Contract	Bank	Derivative credit lines	Details
Commodity futures	Triland	\$ 20,000	Limit of loss
		\$ 20,000	Limit of transaction
	Mitsui Bussan	\$ 15,000	Limit of loss
		\$ 15,000	Limit of transaction
	Toyota	\$ 13,000	Limit of loss
		\$ 13,000	Limit of transaction
	Societe General	\$ 20,000	Limit of loss
		\$ 20,000	Limit of transaction
	BOCI	\$ 10,000	Limit of loss
		\$ 10,000	Limit of transaction
	Daishin Securities(*2)	\$ 5,000	Limit of loss

(*1) Includes limit of transaction on currency swap contracts.

(*2) Includes limit of transaction on currency futures contracts.

Details of unsettled contracts for currency forwards, commodity futures and currency swap contract are as follows (U.S. dollar and Singapore dollar in thousands, Korean won in millions):

18.5.1 Currency forwards

Currency unit	Unsettled contractual amount		Accumulated valuation gain (loss)
	Long position	Short position	
USD	₩ 65,501	₩ 342,972	₩ (3,087)
EUR	37,288	415,099	10,656
JPY	8,581	20,902	82
CNY	1,795	20,573	(46)
AED	873	769	(1)
CHF	112	-	(2)
CAD	-	119,022	1,838
GBP	1,977	54,457	932
AUD	27,580	4,026	(269)
			₩ 10,103
U. S. dollar in thousands (Note 2)			\$ 8,360

18.5.2 Commodity futures

Commodity	Unsettled contractual amount		Accumulated valuation gain (loss)
	Long position	Short position	
Aluminum	₩ 51,844	₩ 94,437	₩ 519
Copper	40,974	74,297	1,081
Nickel	65,562	146,162	7,693
Tin	7,137	22,194	(414)
Soybean	25,994	21,045	1,876
Corn	19,374	-	(273)
Singapore Gasoil	3,322	-	42
Cotton	-	253	(3)
Rubber	961	2,421	(167)
Brent	338	-	5
Fuel oil	2,564	371	149
			₩ 10,508
U. S. dollar in thousands (Note 2)			\$ 8,695

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18.5.3 Currency futures

Currency unit	Unsettled contractual amount		Accumulated valuation gain (loss)
	Long position	Short position	
JPY	₩ 387	₩ 1,560	₩ 4
U. S. dollar in thousands (Note 2)			\$ 3

18.5.4 Currency swap

Bank	Unsettled contractual amount		Expiration date	Interest swap	Valuation gain (loss)
	Payment	Receipt			
UOB	\$ 69,077	SGD 96,500	Oct. 27, 2017	Pay 3M US\$ Libor+1.10% Receive 3M SGD SOR+0.75%	₩ (3,316)
KEB Hana Bank	\$ 130,000	₩ 132,600	Jun. 30, 2017	Pay 3M US\$ Libor+1.21% Receive KRW 3.20%	(23,877)
KEB Hana Bank	\$ 70,000	₩ 71,120	Jun. 30, 2017	Pay 3M US\$ Libor+1.20% Receive KRW 3.20%	(13,136)
Credit Agricole	\$ 29,891	SGD 41,500	Oct. 27, 2017	Pay 3M US\$ Libor+1.05% Receive 3M SGD SOR+0.75%	(1,604)
					<u>₩ (41,933)</u>
U. S. dollar in thousands (Note 2)					<u>\$ (34,698)</u>

Changes in the book value of derivative financial assets (liabilities) for the year ended December 31, 2016 are as follows:

	Korean won in millions				Ending balance
	Beginning balance	Settlement	Valuation gain	Valuation loss	
Currency forwards	₩ 6,254	₩ (6,396)	₩ 15,951	₩ (5,706)	₩ 10,103
Commodity futures	37,437	(37,437)	19,168	(8,660)	10,508
Currency futures	(35)	35	11	(7)	4
Currency swap	(30,652)	-	-	(11,281)	(41,933)
Firm commitment contracts	(14,353)	3,870	36,786	(32,616)	(6,313)
Others	(2,337)	-	-	(768)	(3,105)
	<u>₩ (3,686)</u>	<u>₩ (39,928)</u>	<u>₩ 71,916</u>	<u>₩ (59,038)</u>	<u>₩ (30,736)</u>
U. S. dollar in thousands (Note 2)	<u>\$ (3,050)</u>	<u>\$ (33,039)</u>	<u>\$ 59,508</u>	<u>\$ (48,852)</u>	<u>\$ (25,433)</u>

The Group uses commodity futures and other financial instruments to hedge its commodity price risks and other risks attributable to firm sales or purchase contracts. The Group applies fair value hedge accounting under which the firm sales or purchase contracts (the firm commitment contract) are designated as the hedged item with commodity futures and others as hedging instruments.

The firm commitment contracts in connection with commodity futures and others were valued at fair value. As a result of such valuation, the resulting unrealized gains and losses on valuation were recorded as firm commitment contracts assets and liabilities, respectively.

For the year ended December 31, 2016, settled firm commitment contracts amounting to ₩1,059 million and ₩4,929 million were deducted from sales and cost of sales, respectively.

18.6 Guarantee obligations

Guarantees provided by the Group to certain creditors on behalf of associates/debtors as at December 31, 2016 are as follows:

Debtor	Creditor	Limit amount		Outstanding balance		Year of expiration
		Foreign currency amounts (in thousands)	Korean won equivalent (in millions)	Foreign currency amounts (in thousands)	Korean won equivalent (in millions)	
Global Komsco Daewoo	ICBC	\$ 8,225	₩ 9,940	\$ 7,263	₩ 8,777	2019
	Bank of China, Seoul	963	1,163	963	1,163	2017
POSCO Assan TST	ING and others	14,653	17,708	14,653	17,708	2020
Ambatovy project investments Ltd.	Korea EXIM Bank	65,455	79,102	38,578	46,622	2019
Sherritt International Corporation	Korea EXIM Bank	21,818	26,367	6,042	7,301	2023
		<u>\$ 111,114</u>	<u>₩ 134,280</u>	<u>\$ 67,499</u>	<u>₩ 81,571</u>	

Principal debtors listed above are related parties of the Group, excluding Sherritt International Corp. and Ambatovy Project Investments Ltd. (see Note 31).

Investments in DMSA and AMSA (book value: ₩69,149 million) have been pledged as collateral to creditors in connection with the above payment guarantees.

18.7 Other commitments

18.7.1 Canada Baptiste Project

In accordance with the joint investment agreement between the Company and Devonian Private Equity Fund ("Devonian PEF"), Devonian PEF has a put option to sell its interest in Canada Baptiste Project to the Company with the minimum guaranteed return of 6.5% per annum for 6 months from 4 years after execution of investments. As at December 31, 2016, Devonian PEF's interests in Canada Baptiste Project amounted to ₩120,346 million (\$99,583 thousand).

An estimated loss of ₩45,341 million (\$37,518 thousand) is recorded as provisions in relation to the exercise of the option right in this year.

18.7.2 Daewoo Global Development Pte. Ltd.

In accordance with the Shareholders' Agreement and the Put Option Agreement between the Company and other shareholders of Daewoo Global Development Pte Ltd. ("DGDP"), the financial investor in DGDP or any successor of FI ("FI") has a put option to sell its equity interest in DGDP and its subordinated loan to DGDP to other shareholders for 3 years and 9 months from the first capital contribution date. The guaranteed return on the put option is 5.25% per annum on the equity interest and 10% per annum on the subordinated loan. If FI exercises its put option, the Company and the shareholders is to purchase the equity interest and the subordinated loan put by FI in proportion to its equity ownership. Other shareholders except the Company may decline to purchase the equity interest and the subordinated loan. Amounts of the shares underlying the put option as at December 31, 2016 amounts ₩23,565 million (\$19,499 thousand) and there is no underlying subordinated loan.

In relation to the put option, ₩3,105 million (\$2,569 thousand) is recorded as derivative financial liabilities as at December 31, 2016.

In accordance with the stand-by loan agreement between the Company and other shareholders of DGDP, the Company and other shareholders except FI should provide subordinated loan jointly in case that DGDP would suffer from lack of fund for redemption of borrowings from FI and related interests. In addition, interests in DGDP of the Company and other shareholders except FI have been pledged as collateral to FI in connection with those borrowings. As at December 31, 2016, the outstanding borrowings amounts to ₩195,777 million (\$161,999 thousand).

18.7.3 SPH Co., Ltd.

In 2014, the Company and POSCO Engineering Co., Ltd. established a 50-50 joint venture SPH Co., Ltd. ("SPH") for the construction and the lease of company housing. In accordance with the loan agreement between SPH and its creditors, the Company and POSCO Engineering Co., Ltd. should provide subordinated loan jointly in case that SPH would suffer from lack of funds for redemption of borrowings from its creditors and related interests. As at December 31, 2016, the outstanding borrowings amounts to ₩68,000 million (\$56,268 thousand).

19. Issued capital and capital surplus

Issued capital as at December 31, 2016 is as follows (Korean won in millions, Korean won for Par Value amount):

	Number of shares authorized	Number of shares issued	Par value	Issued capital	Paid-in capital in excess of par value (capital surplus)
Ordinary shares	500,000,000	113,876,291	₩ 5,000	₩ 569,381	₩ 333,145
U. S. dollar in thousands (Note 2)				\$ 471,147	\$ 275,668

Capital surplus as at December 31, 2015 and 2016 as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Paid-in capital in excess of par value	₩ 333,145	₩ 333,145	\$ 275,668
Other capital surplus	16	16	13
	₩ 333,161	₩ 333,161	\$ 275,681

20. Accumulated other comprehensive income

Accumulated other comprehensive income as at December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Gain on valuation of available-for-sale financial assets	₩ 22,422	₩ 21,129	\$ 17,484
Change in equity adjustment in equity method investments	52,534	57,650	47,704
Cumulative exchange differences on translations of foreign operations	(7,108)	9,684	8,013
	₩ 67,848	₩ 88,463	\$ 73,201

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21. Dividends

Details of dividends declared for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Dividends per share (Korean won and U.S. dollar) (dividend ratio) (A)	₩ 500 (10%)	₩ 500(10%)	\$ 0.414(10%)
Number of shares (B)	113,876,291	113,876,291	113,876,291
Dividends (A x B)	₩ 56,938	₩ 56,938	\$ 47,115

22. Expenses disclosed by the nature

Expenses disclosed by the nature of expense (cost of sales and selling and administrative expense) for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Cost of goods sold	₩ 15,935,671	₩ 15,196,794	\$ 12,574,923
Material costs	122,691	86,915	71,920
Changes in inventories	13,993	4,607	3,812
Employee salaries	178,818	179,661	148,664
Depreciation of property, plant and equipment	39,285	30,752	25,446
Amortization of intangible asset	129,249	132,734	109,834
Depreciation of investment properties	2,908	2,908	2,406
Others	735,487	539,580	446,488
	₩ 17,158,102	₩ 16,173,951	\$ 13,383,493

23. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Salaries	₩ 145,810	₩ 150,140	\$ 124,237
Severance benefit	12,709	14,944	12,366
Employee benefits	33,228	33,982	28,119
Travel	12,434	10,305	8,527
Communication	5,476	5,043	4,173
Utilities	2,634	775	641
Taxes and dues	11,280	11,218	9,283
Rents	18,543	16,325	13,508
Depreciation	10,877	13,105	10,844
Amortization	8,452	4,416	3,654
Repairs	1,250	555	459
Insurance	25,963	27,030	22,367
Entertainment	2,084	1,822	1,508
Advertising	1,971	1,091	903
Exhibition	257	119	98
Packaging	461	410	339
Freight	424,896	377,198	312,121
Shipping	36,684	37,636	31,143
Commissions	101,736	68,287	56,506

23. Selling and administrative expenses (cont'd)

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Operating lease	77	29	24
Bad debt expenses	38,032	31,793	26,308
Supplies	1,012	1,146	948
Car maintenance	2,321	2,180	1,804
Printing	360	374	309
Training	1,746	1,597	1,321
Research and development	4,081	1,344	1,112
Sales promotion	14,100	2,716	2,247
Samples	220	199	165
Miscellaneous expense	667	1,205	997
Conference	359	289	239
Others	432	463	384
	<u>₩ 920,152</u>	<u>₩ 817,736</u>	<u>\$ 676,654</u>

24. Finance income and costs

Details of finance income for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Interest income	₩ 48,247	₩ 35,074	\$ 29,023
Financial guarantee income	753	299	246
Dividends income	608	446	369
Gain on foreign currency transactions	597,594	589,093	487,458
Gain on foreign currency translation	241,978	134,646	111,416
Gain on valuation of derivatives	115,194	71,915	59,508
Gain on settlement of derivatives	309,481	252,906	209,273
	<u>₩ 1,313,855</u>	<u>₩ 1,084,379</u>	<u>\$ 897,293</u>

Details of finance costs for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Interest expenses	₩ 58,628	₩ 49,524	\$ 40,980
Financial guarantee expense	17,960	9,061	7,498
Loss on foreign currency transactions	625,794	566,127	468,454
Loss on foreign currency translation	249,527	152,934	126,549
Loss on valuation of derivatives	179,476	59,039	48,853
Loss on settlement of derivatives	251,672	267,606	221,436
Loss on disposal of trade accounts receivable	14,393	17,017	14,081
	<u>₩ 1,397,450</u>	<u>₩ 1,121,308</u>	<u>\$ 927,851</u>

Details of interest income for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Interest income on cash equivalents	₩ 2,660	₩ 2,007	\$ 1,661
Other interest income	45,587	33,067	27,362
	<u>₩ 48,247</u>	<u>₩ 35,074</u>	<u>\$ 29,023</u>

24. Finance income and costs (cont'd)

Details of interest expenses for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Interest on borrowings and bonds	₩ 63,955	₩ 53,128	\$ 43,962
Less: capitalization of borrowing costs	(5,327)	(3,604)	(2,982)
	₩ 58,628	₩ 49,524	\$ 40,980

25. Other income and expenses

Details of other income for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Gain on disposal of associates	₩ -	₩ 890	\$ 736
Gain on disposal of subsidiaries	308	-	-
Gain on disposal of property, plant and equipment	352	538	445
Gain on disposal of intangible assets	28	83	69
Reversal of allowance for doubtful accounts	197	488	404
Gain on disposal of available-for-sale financial assets	-	13	11
Reversal of provision for contingencies	4,058	-	-
Gain on disposal of disposal groups classified as held for sale	618	-	-
Reversal of loss on impairment of disposal groups classified as held for sale	136	-	-
Miscellaneous income	23,214	19,018	15,737
	₩ 28,911	₩ 21,030	\$ 17,402

Details of other expenses for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Loss on disposal of subsidiaries	₩ -	₩ 13,637	\$ 11,284
Contribution to provisions for restoration	136	440	364
Other bad debt expenses	55,689	28,344	23,454
Loss on disposal of property, plant and equipment	244	181	150
Loss on disposal of intangible assets	309	-	-
Loss on impairment of property, plant and equipment	-	26,794	22,171
Loss on impairment of intangible assets	17,298	21,855	18,084
Donations	1,304	1,327	1,098
Contribution to provision for contingencies	18,401	32,592	26,969
Loss on impairment of investment in associates	-	218	180
Loss on disposal of available-for-sale financial assets	-	530	439
Loss on impairment of available-for-sale financial assets	498	182	151
Miscellaneous expenses	30,925	39,438	32,634
Loss on disposal of disposal groups classified as held for sale	27	-	-
Others	2,653	-	-
	₩ 127,484	₩ 165,538	\$ 136,978

26. Impairment of financial instruments

Details of impairment of financial instruments for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in
	2015	2016	thousands (Note 2)
Bad debt expenses	₩ 38,032	₩ 31,793	\$ 26,308
Other bad debt expenses	52,625	24,731	20,464
Less: reversal of allowance for doubtful accounts	(108)	(476)	(394)
Loss on impairment of available-for-sale financial assets	498	182	151
	₩ 91,047	₩ 56,230	\$ 46,529

27. Income taxes

The major components of income tax expenses for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in
	2015	2016	thousands (Note 2)
Current income taxes	₩ 64,485	₩ 88,185	\$ 72,971
Changes in deferred income tax arising from temporary differences	(32,756)	(22,943)	(18,985)
Changes in deferred income tax arising from tax credit carryforwards	(1,969)	(2,667)	(2,207)
Income tax charged directly to equity	(4,797)	(10,154)	(8,402)
Income tax expense	₩ 24,963	₩ 52,421	\$ 43,377

The reconciliation between income tax expense at the effective income tax rates of the Group and accounting profit before income tax at the Korea statutory tax rate for the years ended December 31, 2015 and 2016 is as follows:

	Korean won in millions		U. S. dollar in
	2015	2016	thousands (Note 2)
Accounting profit before income tax	₩ 133,541	₩ 174,633	\$ 144,505
Tax at the statutory income tax rate	31,855	41,799	34,588
Adjustments:			
Non-taxable income	(24)	(6)	(5)
Non-deductible expenses	554	2,884	2,386
Effect of deferred income tax not recognized	(1,747)	-	-
Tax credits	(4,355)	(1,626)	(1,345)
Others	(1,320)	9,370	7,753
Income tax expense	₩ 24,963	₩ 52,421	\$ 43,377
Effective income tax rates	18.69%	30.02%	30.02%

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27. Income taxes (cont'd)

Income tax charged directly to equity for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Gain on valuation of available-for-sale financial assets	₩ 669	₩ 412	\$ 341
Re-measurement loss (gain) on defined benefit liabilities	(56)	463	383
Other comprehensive income arising from investments in associates	(10,454)	(7,866)	(6,509)
Exchange differences on translations of foreign operations	5,044	(3,163)	(2,617)
	₩ (4,797)	₩ (10,154)	\$ (8,402)

Changes in deferred income tax assets and liabilities for the years ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015			
	January 1	Recognized in profit or loss	Recognized directly to equity	December 31
Valuation of derivatives	₩ (4,464)	₩ (548)	₩ -	₩ (5,012)
Loss on impairment of investments	34,266	(23,708)	-	10,558
Investment in subsidiaries and associates	6,192	34,533	(5,410)	35,315
Provisions for severance liability	13,448	3,463	(56)	16,855
Severance insurance deposits	(11,966)	(1,304)	-	(13,270)
Amortization of present value discount	3,429	(3,429)	-	-
Debt restructuring	(4,645)	578	-	(4,067)
Extraordinary loss	16,493	450	-	16,943
Allowance for doubtful accounts	-	16,469	-	16,469
Depreciation	8,076	8,287	-	16,363
Loss on impairment of property, plant and equipment	15,846	(15,846)	-	-
Capitalized borrowing costs	(30,178)	1,027	-	(29,151)
Accrued expenses	15,738	910	-	16,648
Conversion of debt to equity	1,812	-	-	1,812
Foreign currency translation	706	228	-	934
Valuation of available-for-sale financial assets	(7,828)	1	669	(7,158)
Gain on revaluation of property, plant and equipment	(1,853)	1,853	-	-
Financial guarantee liabilities	9	4,235	-	4,244
Borrowings with low interest rates	1,665	200	-	1,865
Forgivable borrowings	7,024	(4,059)	-	2,965
Others	23,139	14,213	-	37,352
	86,909	37,553	(4,797)	119,665
Tax credit carryforwards	-	1,969	-	1,969
	₩ 86,909	₩ 39,522	₩ (4,797)	₩ 121,634

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27. Income taxes (cont'd)

	2016			
	January 1	Recognized in profit or loss	Recognized directly to equity	December 31
Valuation of derivatives	₩ (5,012)	₩ 4,762	₩ -	₩ (250)
Loss on impairment of investments	10,558	452	-	11,010
Investment in subsidiaries and associates	35,315	(6,413)	(11,029)	17,873
Provisions for severance liability	16,855	69	463	17,387
Severance insurance deposits	(13,270)	(244)	-	(13,514)
Debt restructuring	(4,067)	(52)	-	(4,119)
Extraordinary loss	16,943	5,447	-	22,390
Allowance for doubtful accounts	16,469	17,909	-	34,378
Depreciation	16,363	10,058	-	26,421
Capitalized borrowing costs	(29,151)	3,681	-	(25,470)
Accrued expenses	16,648	1,573	-	18,221
Conversion of debt to equity	1,812	-	-	1,812
Foreign currency translation	934	(231)	-	703
Gain on valuation of available-for-sale financial assets	(7,158)	-	412	(6,746)
Financial guarantee liabilities	4,244	1,797	-	6,041
Borrowings with low interest rates	1,865	(2,961)	-	(1,096)
Forgivable borrowings	2,965	(371)	-	2,594
Others	37,352	(2,379)	-	34,973
	119,665	33,097	(10,154)	142,608
Tax credit carryforwards	1,969	2,667	-	4,636
	₩ 121,634	₩ 35,764	₩ (10,154)	₩ 147,244
U. S. dollar in thousands (Note 2)	\$ 100,649	\$ 29,594	\$ (8,402)	\$ 121,841

28. Earnings per share

Basic earnings per share for the years ended December 31, 2015 and 2016 are calculated as follows (Korean won in millions, except for per share amounts):

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Profit for the year attributable to ordinary equity holders of the parent	₩ 128,940	₩ 111,254	\$ 92,061
Weighted average number of common shares outstanding	113,876,291	113,876,291	113,876,291
Basic earnings per share (Korean won and U.S. dollar)	₩ 1,132	₩ 977	\$ 0.81

28. Earnings per share (cont'd)

Details of weighted average number of ordinary shares outstanding for the years ended December 31, 2015 and 2016 are as follows:

	2015		
	Number of outstanding shares	Number of days outstanding	Weighted number of shares
Beginning balance	113,876,291	365/365	113,876,291
	<u>113,876,291</u>		<u>113,876,291</u>
	2016		
	Number of outstanding shares	Number of days outstanding	Weighted number of shares
Beginning balance	113,876,291	366/366	113,876,291
	<u>113,876,291</u>		<u>113,876,291</u>

Diluted earnings per share for the years ended December 31, 2015 and 2016 are the same as basic earnings per share as the parent company does not have any potential ordinary shares.

29. Financial instruments

29.1 Capital risk management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders.

The Group monitors capital using a gearing ratio, which is net borrowings divided by total equity. The Group includes within net borrowings, interest bearing borrowings and bonds, less cash and cash equivalents, excluding discontinued operations.

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Total borrowings (A)	₩ 4,038,295	₩ 3,525,477	\$ 2,917,233
Cash and cash equivalents (B)	(224,658)	(173,709)	(143,739)
Net borrowings (A-B)	<u>₩ 3,813,637</u>	<u>₩ 3,351,768</u>	<u>\$ 2,773,494</u>
Total equity (D)	<u>₩ 2,421,189</u>	<u>₩ 2,503,652</u>	<u>\$ 2,071,702</u>
Gearing ratio ((A-B)/D)	<u>158%</u>	<u>134%</u>	<u>134%</u>

29.2 Financial instruments by category

Financial assets by category as at December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015			
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Total
Cash and cash equivalents	₩ -	₩ 224,658	₩ -	₩ 224,658
Trade and other receivables	-	3,156,257	-	3,156,257
Other current financial assets	-	23,629	-	23,629
Derivative financial assets	68,874	-	-	68,874
Non-current trade and other receivables	-	494,036	-	494,036
Other non-current financial assets	-	21	105,585	105,606
	<u>₩ 68,874</u>	<u>₩ 3,898,601</u>	<u>₩ 105,585</u>	<u>₩ 4,073,060</u>
	2016			
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Total
Cash and cash equivalents	₩ -	₩ 173,709	₩ -	₩ 173,709
Trade and other receivables	-	3,483,692	-	3,483,692
Other current financial assets	-	32,534	-	32,534
Derivative financial assets	41,067	-	-	41,067
Non-current trade and other receivables	-	407,474	-	407,474
Other non-current financial assets	-	15	108,677	108,692
	<u>₩ 41,067</u>	<u>₩ 4,097,424</u>	<u>₩ 108,677</u>	<u>₩ 4,247,168</u>
U. S. dollar in thousands (Note 2)	<u>\$ 33,982</u>	<u>\$ 3,390,504</u>	<u>\$ 89,927</u>	<u>\$ 3,514,413</u>

Financial liabilities by category as at December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015		
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Trade and other payables	₩ -	₩ 1,252,100	₩ 1,252,100
Borrowings	-	2,097,122	2,097,122
Current-portion of bonds	-	349,799	349,799
Derivative financial liabilities	72,560	-	72,560
Non-current trade and other payables	-	32,465	32,465
Long-term borrowings	-	696,411	696,411
Bonds	-	894,963	894,963
	<u>₩ 72,560</u>	<u>₩ 5,322,860</u>	<u>₩ 5,395,420</u>

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29.2 Financial instruments by category (cont'd)

	2016		
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Trade and other payables	₩ -	₩ 1,808,416	₩ 1,808,416
Borrowings	-	1,879,023	1,879,023
Current-portion of bonds	-	294,733	294,733
Derivative financial liabilities	71,804	-	71,804
Non-current trade and other payables	-	28,313	28,313
Long-term borrowings	-	592,243	592,243
Bonds	-	759,477	759,477
	₩ 71,804	₩ 5,362,205	₩ 5,434,009
U. S. dollar in thousands (Note 2)	\$ 59,416	\$ 4,437,075	\$ 4,496,491

Profit or loss by category of financial instruments for the years ended December 31, 2015 and 2016 are as follows (Korean won in millions):

	2015					
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Selling and administrative expenses:						
Bad debt expenses	₩ -	₩ (38,032)	₩ -	₩ -	₩ -	₩ (38,032)
Other income (expenses):						
Other bad debt expenses	-	(52,625)	-	-	-	(52,625)
Reversal of allowance for doubtful account	-	108	-	-	-	108
Loss on impairment of available-for-sale financial assets	-	-	(498)	-	-	(498)
Finance income (costs):						
Interest income	-	48,247	-	-	-	48,247
Interest expenses	-	-	-	-	(58,628)	(58,628)
Dividend income	-	-	608	-	-	608
Gain (loss) on foreign currency translation	-	51,611	-	-	(59,161)	(7,550)
Gain (loss) on valuation of derivative financial instruments	115,194	-	-	(179,476)	-	(64,282)
Gain (loss) on settlement of derivatives	309,481	-	-	(251,672)	-	57,809
Loss on disposal of trade receivables	-	(14,393)	-	-	-	(14,393)
Other comprehensive income	-	-	(2,765)	-	-	(2,765)
	₩ 424,675	₩ (5,084)	₩ (2,655)	₩ (431,148)	₩ (117,789)	₩ (132,001)

29.2 Financial instruments by category (cont'd)

	2016					
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for- sale financial assets	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Selling and administrative expenses:						
Bad debt expenses	₩ -	₩ (31,793)	₩ -	₩ -	₩ -	₩ (31,793)
Other income (expenses):						
Other bad debt expenses	-	(24,731)	-	-	-	(24,731)
Reversal of allowance for doubtful account	-	476	-	-	-	476
Gain on disposal of available-for-sale financial assets	-	-	13	-	-	13
Loss on disposal of available-for-sale financial assets	-	-	(530)	-	-	(530)
Loss on impairment of available-for-sale financial assets	-	-	(182)	-	-	(182)
Finance income (costs):						
Interest income	-	35,074	-	-	-	35,074
Interest expenses	-	-	-	-	(49,524)	(49,524)
Dividend income	-	-	446	-	-	446
Gain (loss) on foreign currency translation	-	116,232	-	-	(134,520)	(18,288)
Gain (loss) on valuation of derivative financial instruments	71,915	-	-	(59,039)	-	12,876
Gain (loss) on settlement of derivatives	252,906	-	-	(267,606)	-	(14,700)
Loss on disposal of trade receivables	-	(17,017)	-	-	-	(17,017)
Other comprehensive income	-	-	(1,705)	-	-	(1,705)
	<u>₩ 324,821</u>	<u>₩ 78,241</u>	<u>₩ (1,958)</u>	<u>₩ (326,645)</u>	<u>₩ (184,044)</u>	<u>₩ (109,585)</u>
U. S. dollar in thousands (Note 2)	<u>\$ 268,780</u>	<u>\$ 64,742</u>	<u>\$ (1,620)</u>	<u>\$ (270,290)</u>	<u>\$ (152,291)</u>	<u>\$ (90,679)</u>

29.3 Financial risk management

The Group is exposed to market risk (foreign currency risk and interest rate risk), credit risk, and liquidity risk. The primary purpose of Group's financial risk management is to detect potential risk which could decrease the Group's profit and to eliminate, reduce and hedge such risk to an acceptable level. The Group uses derivative financial instruments for hedging special risk such as foreign currency risk. Financial risk management policy of the Group has been consistent with the policy of prior years.

29.3.1 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: foreign currency risk, interest rate risk and other price risk.

29.3.1.1 Foreign currency risk

The Group is exposed to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. As at December 31, 2015 and 2016, significant monetary assets and liabilities denominated in foreign currencies, other than functional currencies are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)	
	2015		2016		2016	
	Asset	Liability	Asset	Liability	Asset	Liability
USD	₩ 3,422,798	₩ 3,204,448	₩ 3,593,381	₩ 3,441,720	\$ 2,973,422	\$ 2,847,927
JPY	49,480	46,328	35,659	25,840	29,507	21,382
EUR	428,560	374,830	448,631	314,911	371,230	260,580

Effects of fluctuation in foreign exchange rates on the Group's functional currency by 10% on profit for the year ended December 31, 2016 are as follows (Korean won in millions):

	Increase by 10%		Decrease by 10%	
USD	₩	15,166	₩	(15,166)
JPY		982		(982)
EUR		13,372		(13,372)

29.3.1.2 Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's borrowings and bonds with floating interest rates.

As at December 31, 2016, with all other variables remaining constant, a change by 1% points of the floating interest rate on borrowings will have an effect of ₩9,584 million (US\$ 7,930 thousands) on the Group's profit for the year.

29.3.2 Credit risk

Credit risk is the risk that counterparties will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group's exposure to the credit risk relates to operating and financial activities.

29.3.2.1 Trade and other receivables

Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance.

29.3.2.2 Other assets

Credit risks associated with the Group's other assets which consist of cash, short-term deposits and short-term and long-term loans arise from the default by the counterparties. Maximum exposure to credit risks will be the book value of the other assets. The Group deposits its surplus funds in Woori Bank and other financial institutions whose credit ratings are high, therefore, credit risk related to financial institutions is considered low.

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29.3.2.3 Maximum exposure to credit risk

As at December 31, 2015 and 2016, the maximum exposure to credit risk of the Group is as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Cash and cash equivalents	₩ 224,658	₩ 173,709	\$ 143,739
Trade and other receivables	3,156,257	3,483,692	2,882,658
Other current financial assets	23,629	32,534	26,921
Derivative financial assets	68,874	41,067	33,982
Non-current trade and other receivables	494,036	407,474	337,173
Other non-current financial assets	105,606	108,692	89,940
Financial guarantee contract	457,321	427,016	353,344
	<u>₩ 4,530,381</u>	<u>₩ 4,674,184</u>	<u>\$ 3,867,757</u>

Aging analysis of non-derivative financial instruments as at December 31, 2016 is as follows:

	Total	Not past due	Past due but not impaired				
			Within 30 days	30 days to 60 days	60 days to 90 days	90 days to 120 days	Over 120 days
Cash and cash equivalents	₩ 173,709	₩ 173,709	₩ -	₩ -	₩ -	₩ -	₩ -
Trade and other receivables	3,483,692	3,216,785	73,474	11,513	2,585	7,058	172,277
Other current financial assets	32,534	32,534	-	-	-	-	-
Non-current trade and other receivables	407,474	407,474	-	-	-	-	-
Other non-current financial assets	108,692	108,692	-	-	-	-	-
	<u>₩ 4,206,101</u>	<u>₩ 3,939,194</u>	<u>₩ 73,474</u>	<u>₩ 11,513</u>	<u>₩ 2,585</u>	<u>₩ 7,058</u>	<u>₩ 172,277</u>
U. S. dollar in thousands (Note 2)	<u>\$ 3,480,431</u>	<u>\$ 3,259,573</u>	<u>\$ 60,798</u>	<u>\$ 9,527</u>	<u>\$ 2,139</u>	<u>\$ 5,840</u>	<u>\$ 142,554</u>

29.3.3 Liquidity risk

The Group establishes short and long-term capital management plans and analyzes and reviews cash flow budgets against actual cash outflows in order to match the maturity of financial liabilities and financial assets. The Group believes that it has sufficient cash inflows from operating activities and financial assets to redeem financial liabilities that become due.

The aggregated maturities of financial liabilities outstanding as at December 31, 2016, excluding present value discount, are as follows (Korean won in millions):

	Within 1 year	1 year to 5 years	Over 5 years	Total
Trade and other payables	₩ 1,808,416	₩ 26,869	₩ 1,444	₩ 1,836,729
Derivative financial liabilities	71,804	-	-	71,804
Borrowings	1,896,880	355,130	410,422	2,662,432
Bonds	299,075	780,290	-	1,079,365
Financial guarantee liabilities	1,163	80,408	263,777	345,348
	<u>₩ 4,077,338</u>	<u>₩ 1,242,697</u>	<u>₩ 675,643</u>	<u>₩ 5,995,678</u>
U. S. dollar in thousands (Note 2)	<u>\$ 3,373,883</u>	<u>\$ 1,028,297</u>	<u>\$ 559,076</u>	<u>\$ 4,961,256</u>

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29.4 Fair value of financial instruments

Book value and fair value of financial instruments as at December 31, 2015 and 2016 are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)	
	2015		2016		2016	
	Book value	Fair value	Book value	Fair value	Book value	Fair value
<Financial assets>						
Financial assets carried at amortized cost:						
Cash and cash equivalents	₩ 224,658	₩ 224,658	₩ 173,709	₩ 173,709	\$ 143,739	\$ 143,739
Trade and other receivables	3,156,257	3,156,257	3,483,692	3,483,692	2,882,658	2,882,658
Other current financial assets	23,629	23,629	32,534	32,534	26,921	26,921
Non-current trade and other receivables	494,036	494,036	407,474	407,474	337,173	337,173
Other non-current financial assets	21	21	15	15	13	13
	<u>3,898,601</u>	<u>3,898,601</u>	<u>4,097,424</u>	<u>4,097,424</u>	<u>3,390,504</u>	<u>3,390,504</u>
Financial assets carried at fair value:						
Derivative financial assets	68,874	68,874	41,067	41,067	33,982	33,982
Available-for-sale financial assets(*)	59,890	59,890	57,605	57,605	47,666	47,666
	<u>128,764</u>	<u>128,764</u>	<u>98,672</u>	<u>98,672</u>	<u>81,648</u>	<u>81,648</u>
	<u>₩ 4,027,365</u>	<u>₩ 4,027,365</u>	<u>₩ 4,196,096</u>	<u>₩ 4,196,096</u>	<u>\$ 3,472,152</u>	<u>\$ 3,472,152</u>
<Financial liabilities>						
Financial liability carried at amortized cost:						
Trade and other payables	₩ 1,252,100	₩ 1,252,100	₩ 1,808,416	₩ 1,808,416	\$ 1,496,414	\$ 1,496,414
Current portion of borrowings	2,097,122	2,097,122	1,879,023	1,879,023	1,554,839	1,554,839
Current portion of bonds	349,799	355,845	294,733	298,112	243,883	246,679
Non-current trade and other payables	32,465	32,465	28,313	28,313	23,428	23,428
Borrowings	696,411	696,411	592,243	592,243	490,065	490,065
Bonds	894,963	912,755	759,477	772,589	628,446	639,296
	<u>5,322,860</u>	<u>5,346,698</u>	<u>5,362,205</u>	<u>5,378,696</u>	<u>4,437,075</u>	<u>4,450,721</u>
Financial liability carried at fair value:						
Derivative financial liabilities	72,560	72,560	71,804	71,804	59,416	59,416
	<u>₩ 5,395,420</u>	<u>₩ 5,419,258</u>	<u>₩ 5,434,009</u>	<u>₩ 5,450,500</u>	<u>\$ 4,496,491</u>	<u>\$ 4,510,137</u>

(*) Excludes equity securities carried at cost as the fair value of those securities could not be measured reliably.

30. Fair value measurement

30.1 Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value by valuation technique:

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

Level 2: Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly

Level 3: Techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

30.1 Fair value hierarchy (cont'd)

The fair values of financial instruments by fair value hierarchy as at December 31, 2016 are as follows:

	Level 1	Level 2	Level 3	Total
Assets measured at fair value:				
Available-for-sale financial assets	₩ 20,620	₩ 103	₩ 36,882	₩ 57,605
Derivative financial assets	-	41,067	-	41,067
Assets for which fair values are disclosed:				
Cash and cash equivalents	-	173,709	-	173,709
Trade and other receivables	-	-	3,483,692	3,483,692
Other current financial assets	-	32,534	-	32,534
Non-current trade and other receivables	-	-	407,474	407,474
Other non-current financial assets	-	15	-	15
Investment properties	-	-	170,285	170,285
Liabilities measured at fair value:				
Derivative financial liabilities	-	71,804	-	71,804
Liabilities for which fair values are disclosed:				
Trade and other payables	-	-	1,808,416	1,808,416
Short-term borrowings	-	1,879,023	-	1,879,023
Current-portion of bonds	-	298,112	-	298,112
Non-current trade and other payables	-	-	28,313	28,313
Long-term borrowings	-	592,243	-	592,243
Bonds	-	772,589	-	772,589

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations. These instruments are included in Level 1, mostly are classified into available-for-sale financial assets which are listed stocks.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. This valuation technique fully makes use of observable market information as possible and internal information at minimum. When every significant variable required for measuring fair value of the instrument is observable, the instrument is classified into Level 2.

Such techniques may include using recent arm's length market transactions; reference to the current fair value of another instrument that is substantially the same; discounted cash flow analysis or other valuation models.

When one or more significant variable is not based on observable market information, the instrument is classified into Level 3.

Valuation techniques used to measure fair values of instruments are:

- Quoted prices or dealer price of similar instrument
- Present value discounted by forward exchange rate as of year-end is used for fair value of derivative instrument
- Discounted cash flow and other techniques are used for other instruments

A reasonable approximate value of fair value is used as book values of instruments which are classified into same category with trade and other receivables.

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30.1 Fair value hierarchy (cont'd)

The Group used the interest rate for U.S. government treasury bills in determining the fair value of the derivative financial assets and liabilities valued at Level 2 hierarchy. Also, the Group used the risk-free interest rate of 1.75% and market risk premium of 9.64% in determining the fair value of available-for-sale financial assets valued at Level 3 hierarchy.

31. Related party transactions

Significant transactions with related parties for the years ended December 31, 2015 and 2016 and the related account balances outstanding as at December 31, 2015 and 2016 are summarized as follows (Korean won in millions):

	2015					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company:						
POSCO	₩ 120,417	₩ -	₩ 120,417	₩ 3,388,329	₩ 132,955	₩ 3,521,284
Associates:						
POSCO Mexico Processing Center Holding LLC	259,857	-	259,857	127	-	127
POSCO-ESDC Ltd.	-	101	101	-	3,372	3,372
POSCO IJPC	26,385	-	26,385	2,364	-	2,364
Shanghai Lansheng Daewoo Corporation	11,806	-	11,806	-	728	728
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	215,728	-	215,728	7,149	-	7,149
General Medicines Co., Ltd.	4,038	364	4,402	-	-	-
Korea LNG Ltd.	-	12,195	12,195	-	-	-
DMSA/AMSA	800	9,493	10,293	241,069	-	241,069
South-East Asia Gas Pipeline Company Limited	-	48,071	48,071	-	-	-
Global Komsco Daewoo LLC	-	-	-	6,532	-	6,532
POSCO-AAPC Corp.	23,706	-	23,706	137	1,893	2,030
VNS-Daewoo Co., Ltd.	25,345	-	25,345	-	11	11
Daewoo Global Development Pte. Ltd.	2,312	-	2,312	-	-	-
PT. Batutua Tembaga Raya	-	-	-	1,280	-	1,280
Others:						
POSCO ASIA CO., Ltd.	10,195	-	10,195	270,258	-	270,258
POSCO-Vietnam	62,323	-	62,323	68,554	-	68,554
POSCO-Thainox	8,368	-	8,368	45,578	-	45,578
POSCO Assan TST	256,724	-	256,724	5,523	-	5,523
POSCO C&C Co., Ltd.	33,108	-	33,108	68,764	-	68,764
POSCO America Corp.	8,355	-	8,355	-	-	-
Zhangjiagang Pohang Stainless Steel Co.,Ltd.	52,522	-	52,522	24,290	-	24,290
POSCO-Foshan Steel Processing Center Co.,Ltd	42,863	-	42,863	4,206	-	4,206
POSCO-Malaysia Sdn.Bhd.	36,925	-	36,925	11,210	6	11,216
POSCO-ITPC	129,355	-	129,355	7,615	-	7,615
POSCO VST Co.,Ltd.	39,039	-	39,039	17,530	-	17,530
POSCO Maharashtra Steel Pvt. Ltd.	22,948	-	22,948	8,406	-	8,406
Other affiliates of POSCO	508,437	-	508,437	506,568	56,112	562,680
	₩ 1,901,556	₩ 70,224	₩ 1,971,780	₩ 4,685,489	₩ 195,077	₩ 4,880,566

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31. Related party transactions (cont'd)

	2016					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company:						
POSCO	₩ 182,436	₩ -	₩ 182,436	₩ 3,135,540	₩ 107,329	₩ 3,242,869
Associates:						
POSCO Mexico Processing Center Holding LLC	250,234	-	250,234	405	-	405
POSCO-ESDC Ltd.	-	-	-	-	3,108	3,108
POSCO IJPC	42,826	-	42,826	-	-	-
Shanghai Lansheng Daewoo Corporation	15,375	-	15,375	-	791	791
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	157,951	-	157,951	2,616	-	2,616
General Medicines Co., Ltd.	5,909	470	6,379	-	-	-
Korea LNG Ltd.	-	6,342	6,342	-	-	-
DMSA/AMSA	-	-	-	72,580	-	72,580
South-East Asia Gas Pipeline Company Limited	-	87,657	87,657	-	-	-
Global Komsco Daewoo LLC	-	-	-	9,825	-	9,825
Daewoo Global Development Pte. Ltd.	2,327	-	2,327	-	-	-
PT. Batutua Tembaga Raya	-	-	-	15,964	-	15,964
SPH Co., Ltd.	50	-	50	-	-	-
VNS-Daewoo Co., Ltd.	-	-	-	73	-	73
Others:						
POSCO ASIA CO., Ltd.	34,819	-	34,819	491,949	-	491,949
POSCO-Vietnam	53,341	-	53,341	44,111	-	44,111
POSCO-Thainox	48,076	-	48,076	44,134	-	44,134
POSCO Assan TST	264,968	-	264,968	7,263	-	7,263
POSCO-AAPC	38,850	-	38,850	62	-	62
POSCO C&C Co., Ltd.	85,231	-	85,231	98,970	19	98,989
POSCO America Corp.	45,792	-	45,792	27,730	-	27,730
Zhangjiagang Pohang Stainless Steel Co.,Ltd.	81,760	-	81,760	635	-	635
POSCO-Foshan Steel Processing Center Co.,Ltd	69,242	-	69,242	1,221	-	1,221
Companhia Siderurgica Do Pecem	63,782	-	63,782	-	-	-
POSCO-Malaysia Sdn.Bhd.	47,273	-	47,273	9,091	-	9,091
POSCO-ITPC	50,114	-	50,114	5,841	-	5,841
POSCO VST Co.,Ltd.	104,771	-	104,771	23,030	-	23,030
POSCO Maharashtra Steel Pvt. Ltd.	317,446	-	317,446	56,709	-	56,709
Other affiliates of POSCO	442,517	533	443,050	404,821	57,355	462,176
	₩ 2,405,090	₩ 95,002	₩ 2,500,092	₩ 4,452,570	₩ 168,602	₩ 4,621,172
U. S. dollar in thousands (Note 2)	\$ 1,990,145	\$ 78,612	\$ 2,068,757	\$ 3,684,377	\$ 139,513	\$ 3,823,890

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31. Related party transactions (cont'd)

Significant balances outstanding with related parties as at December 31, 2015 and 2016 are summarized as follows (Korean won in millions):

	2015					
	Receivables and others ¹			Payables and others		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company:						
POSCO	₩ 418	₩ 61	₩ 479	₩ 140,509	₩ 5,189	₩ 145,698
Associates:						
POSCO Mexico Processing Center Holding LLC	58,633	106	58,739	-	-	-
POSCO-ESDC LTD.	-	-	-	-	117	117
POSCO IJPC	15,566	-	15,566	1	-	1
Shanghai Lansheng Daewoo Corporation	5,122	-	5,122	-	581	581
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	101,806	-	101,806	921	-	921
General Medicines Co., Ltd.	1,768	12	1,780	-	70	70
Korea LNG Ltd.	-	727	727	-	-	-
DMSA/AMSA ²	-	107,247	107,247	-	-	-
KG Power(M) Sdn. Bhd	2,339	-	2,339	-	-	-
South-east Asia Gas Pipeline Co Ltd ²	-	283,954	283,954	-	-	-
Global Komsco Daewoo LLC	-	569	569	-	45	45
POSCO AAPC Corp.	716	-	716	336	10	346
PT. Batutua Tembaga Raya ²	-	36,830	36,830	-	-	-
Daewoo Global Development Pte. Ltd.	-	2,344	2,344	-	-	-
Korea Siberia Wood CJSC	-	2,190	2,190	-	-	-
Others:						
POSCO ASIA Co.,Ltd.	-	-	-	105,345	-	105,345
POSCO-Vietnam	37,666	-	37,666	101	-	101
POSCO-Thainox	983	-	983	6,555	-	6,555
POSCO Assan TST	134,943	251	135,194	254	242	496
POSCO C&C Co., Ltd.	5,207	-	5,207	6,965	-	6,965
POSCO America Corp.	2,576	-	2,576	-	-	-
Zhangjiagang Pohang Stainless Steel Co.,Ltd.	7,579	-	7,579	186	-	186
POSCO-Foshan Steel Processing Center Co., Ltd.	6,826	-	6,826	214	-	214
POSCO-Malaysia Sdn.Bhd.	3,595	-	3,595	496	-	496
POSCO-ITPC	46,156	-	46,156	-	-	-
POSCO VST CO., LTD.	32,383	-	32,383	1,071	-	1,071
POSCO Maharashtra Steel Pvt. LTD.	8,392	-	8,392	224	-	224
Other affiliates of POSCO	113,048	98	113,146	13,428	12,421	25,849
	₩ 585,722	₩ 434,389	₩ 1,020,111	₩ 276,606	₩ 18,675	₩ 295,281

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31. Related party transactions (cont'd)

	2016					
	Receivables and others(*1)			Payables and others		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company:						
POSCO	₩ 1,203	₩ 63	₩ 1,266	₩ 196,326	₩ 5,206	₩ 201,532
Associates:						
POSCO Mexico Processing Center Holding LLC	86,868	-	86,868	25	-	25
POSCO-ESDC LTD.	-	-	-	-	73	73
POSCO IJPC	15,630	-	15,630	-	-	-
Shanghai Lansheng Daewoo Corporation	8,612	-	8,612	-	588	588
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	70,397	-	70,397	-	-	-
General Medicines Co., Ltd.	1,018	-	1,018	-	-	-
Korea LNG Ltd.	-	604	604	-	-	-
DMSA/AMSA(*2)	-	93,994	93,994	-	-	-
South-east Asia Gas Pipeline Co Ltd(*2)	-	276,653	276,653	-	-	-
Global Komsco Daewoo LLC	-	598	598	-	74	74
Daewoo Global Development Pte. Ltd.	-	4,834	4,834	-	-	-
PT. Batutua Tembaga Raya(*2)	-	32,070	32,070	2,293	-	2,293
Korea Siberia Wood CJSC	-	2,258	2,258	-	-	-
KG Power(M) Sdn. Bhd	2,408	332	2,740	2,579	-	2,579
Others:						
POSCO ASIA Co.,Ltd.	216	-	216	182,660	-	182,660
POSCO-Vietnam	23,642	-	23,642	2,584	-	2,584
POSCO-Thainox	4,340	-	4,340	1,534	-	1,534
POSCO Assan TST	173,062	207	173,269	1,053	193	1,246
POSCO-AAPC	11,831	-	11,831	36	12	48
POSCO C&C Co., Ltd.	7,534	-	7,534	11,932	5	11,937
POSCO America Corp.	6,506	-	6,506	3,000	-	3,000
Zhangjiagang Pohang Stainless Steel Co., Ltd.	10,522	28	10,550	-	-	-
POSCO-Foshan Steel Processing Center Co., Ltd.	17,071	-	17,071	-	-	-
Companhia Siderurgica Do Pecem	13,472	-	13,472	-	-	-
POSCO-Malaysia Sdn.Bhd.	693	-	693	400	-	400
POSCO-ITPC	13,628	-	13,628	1,957	-	1,957
POSCO VST CO., LTD.	51,963	-	51,963	880	-	880
POSCO Maharashtra Steel Pvt. LTD.	127,116	-	127,116	9,509	-	9,509
Other affiliates of POSCO	119,853	2,594	122,447	17,715	16,874	34,589
	₩ 767,585	₩ 414,235	₩ 1,181,820	₩ 434,483	₩ 23,025	₩ 457,508
U. S. dollar in thousands (Note 2)	\$ 635,155	\$ 342,768	\$ 977,923	\$ 359,523	\$ 19,053	\$ 378,576

(*1) The allowance for doubtful account for the above receivables for the years ended December 31, 2016 and 2015 amounted to ₩6,732 million (\$5,571 thousand) and ₩4,268 million (\$3,531 thousand).

(*2) Other receivables from DMSA/AMSA, South-east Asia Gas Pipeline Company Limited ("SEAGP"), and PT. Batutua Tembaga Raya include loan investments in accordance with the relevant agreement. The changes in such loan investments during the year ended December 31, 2016 are as follows:

POSCO DAEWOO Corporation and its subsidiaries
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31. Related party transactions (cont'd)

	Beginning balance	Increase(*)	Decrease	Debt-for-Equity Swap	Foreign exchange translation and others	Ending balance
DMSA/AMSA	₩ 99,855	₩ 11,774	₩ -	₩ (24,624)	₩ 3,633	₩ 90,638
SEAGP	283,953	27,087	(43,080)	-	8,645	276,605
PT. Batutua Tembaga Raya	36,830	-	-	(7,040)	2,280	32,070
	₩ 420,638	₩ 38,861	₩ (43,080)	₩ (31,664)	₩ 14,558	₩ 399,313
U. S. dollar in thousands (Note 2)	\$ 348,066	\$ 32,156	\$ (35,647)	\$ (26,201)	\$ 12,046	\$ 330,420

(*)Include capitalized interest

31.1 Key management personnel compensation

Compensations for key management personnel for the years ended December 31, 2015 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2015	2016	2016
Salaries	₩ 11,428	₩ 11,991	\$ 9,922
Long-term employee benefits	695	-	-
Severance and retirement benefits	1,448	1,760	1,456
	₩ 13,571	₩ 13,751	\$ 11,378

31.2 Guarantees provided to related parties

Guarantees provided to related parties as at December 31, 2015 and 2016 are as follows (Korean won in millions):

	Limit amount		Outstanding balance	
	2015	2016	2015	2016
Associate:				
Global Komsco Daewoo LLC	9,639	11,103	9,639	9,940
Yulchon Mexico S.A DE C.V.	563	-	-	-
Shanghai Lansheng Daewoo Corporation	5,317	-	5,317	-
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	8,862	-	8,862	-
Other related parties:				
POSCO Assan TST	17,173	17,708	17,173	17,708
	₩ 41,554	₩ 28,811	₩ 40,991	₩ 27,648
U. S. dollar in thousands (Note 2)	\$ 34,385	\$ 23,840	\$ 33,919	\$ 22,878

32. Events after the reporting period

In accordance with the resolution made by Board of Directors on November 4, 2016, the Group merged with a steel business division of POSCO P&S CO., Ltd. on March 1, 2017

The main contents related to the merger are as follows:

	<u>Description of merger</u>
Type of merger	Small-scale merger
Merger	POSCO P&S's steel and other business divisions
Corporation after merger	POSCO DAEWOO Corporation
Date of merger	March 1, 2017
Date of merger registration	March 3, 2017
Ration of merger	POSCO DAEWOO Corporation : POSCO P&S = 1 : 0.4387662 (Split merger ratio)