

# **POSCO DAEWOO Corporation**

Separate financial statements  
for the years ended December 31, 2016 and 2017  
with the independent auditors' report

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## **Independent auditors' report**

### **The Shareholders and Board of Directors POSCO DAEWOO Corporation**

We have audited the accompanying separate financial statements of POSCO DAEWOO Corporation (the "Company"), which comprise the separate statements of financial position as at December 31, 2016 and 2017, and the separate statements of comprehensive income, separate statements of changes in equity and separate statements of cash flows for the years then ended, all presented in Korean won, and a summary of significant accounting policies and other explanatory information.

#### **Management's responsibility for the separate financial statements**

Management is responsible for the preparation and fair presentation of these separate financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the separate 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 separate financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the separate financial statements are free from material misstatement.

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

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

### Opinion

In our opinion, the separate financial statements referred to above, presented in Korean won, present fairly, in all material respects, the separate financial position of the Company as at December 31, 2016 and 2017, and its financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

### Consolidated financial statements presented separately

Without qualifying our opinion, we draw attention to Note 2 to the separate financial statements which states that POSCO DAEWOO Corporation is the parent company of its subsidiaries (collectively referred to as the "Group") and that the consolidated financial statements of the Group prepared in accordance with K-IFRS have been issued separately. We have audited the consolidated financial statements of the Group as at and for the years ended December 31, 2016 and 2017 and expressed an unqualified opinion thereon in our auditors' report dated March 2, 2018.



March 2, 2018

This audit report is effective as at March 2, 2018, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditors' report to the time this report is used. Such events and circumstances could significantly affect the accompanying financial statements and may result in modifications to this report.

# **POSCO DAEWOO Corporation**

Financial statements  
for the years ended December 31, 2016 and 2017

“The accompanying separate 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**  
**Separate statements of financial position**  
**as at December 31, 2016 and 2017**

		Korean won in millions		U.S. dollar in thousands (Note 2)
	Notes	2016	2017	2017
<b>Assets</b>				
<b>Current assets</b>				
Cash and cash equivalents	4,29,30	₩ 43,922	₩ 44,350	\$ 41,394
Trade and other receivables	5,29,30	3,494,714	3,518,262	3,283,799
Other current financial assets	6,29,30	3,083	84	78
Derivative financial assets	18,29,30	41,047	51,066	47,663
Other current assets	7	77,468	114,436	106,810
Inventories	8	357,637	732,612	683,790
		4,017,871	4,460,810	4,163,534
<b>Non-current assets</b>				
Trade and other receivables	5,29,30	449,173	412,817	385,306
Other non-current financial assets	6,29,30	98,713	89,595	83,624
Investments in subsidiaries and associates	9	665,227	746,128	696,405
Property, plant and equipment	10	290,831	637,035	594,582
Intangible assets	11	1,553,763	1,468,727	1,370,848
Investment properties	12,30	161,004	157,631	147,126
Severance benefit assets	16	-	8,224	7,676
Deferred tax assets	27	179,872	200,675	187,302
Current tax assets		3,146	-	-
		3,401,729	3,720,832	3,472,869
<b>Total assets</b>		<b>₩ 7,419,600</b>	<b>₩ 8,181,642</b>	<b>\$ 7,636,403</b>
<b>Liabilities and equity</b>				
<b>Current liabilities</b>				
Trade and other payables	13,29,30	₩ 1,657,860	₩ 1,753,404	\$ 1,636,554
Borrowings	14,29,30	1,470,792	1,745,978	1,629,623
Current portion of bonds	14,29,30	294,733	463,736	432,832
Derivative financial liabilities	18,29,30	71,804	43,454	40,558
Other current liabilities	15	113,945	126,646	118,206
Current tax liabilities		44,618	44,767	41,784
		3,653,752	4,177,985	3,899,557
<b>Non-current liabilities</b>				
Trade and other payables	13,29,30	28,430	23,862	22,272
Borrowings	14,29,30	456,809	372,553	347,725
Bonds	14,29,30	759,477	734,200	685,272
Other non-current liabilities	15	1,588	37,693	35,181
Severance benefit liabilities	16	3,569	437	408
Provisions	17,18	85,038	59,286	55,335
		1,334,911	1,228,031	1,146,193
<b>Total liabilities</b>		<b>4,988,663</b>	<b>5,406,016</b>	<b>5,045,750</b>

(Continued)

**POSCO DAEWOO Corporation**  
**Separate statements of financial position**  
**as at December 31, 2016 and 2017 (cont'd)**

		<b>Korean won in millions</b>		<b>U.S. dollar in thousands (Note 2)</b>
	<b>Notes</b>	<b>2016</b>	<b>2017</b>	<b>2017</b>
<b>Equity</b>				
Issued capital	1,19	₩ 569,381	₩ 616,876	\$ 575,766
Capital surplus	19	333,161	544,003	507,750
Other components of equity	19	-	(6)	(6)
Accumulated other comprehensive income	6,20	21,129	13,383	12,491
Retained earnings	21	1,507,266	1,601,370	1,494,652
<b>Total equity</b>		<b>2,430,937</b>	<b>2,775,626</b>	<b>2,590,653</b>
<b>Total liabilities and equity</b>		<b>₩ 7,419,600</b>	<b>₩ 8,181,642</b>	<b>\$ 7,636,403</b>

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

**POSCO DAEWOO Corporation**  
**Separate statements of comprehensive income**  
**for the years ended December 31, 2016 and 2017**

	Notes	Korean won in millions		U.S. dollar in thousands (Note 2)
		2016	2017	2017
<b>Sales</b>	3	₩ 15,417,230	₩ 20,891,526	\$ 19,499,278
<b>Cost of sales</b>	22	(14,392,093)	(19,738,190)	(18,422,802)
<b>Gross profit</b>		<b>1,025,137</b>	<b>1,153,336</b>	<b>1,076,476</b>
Selling and administrative expenses	22,23,26,29	(720,836)	(800,521)	(747,173)
<b>Operating profit</b>		<b>304,301</b>	<b>352,815</b>	<b>329,303</b>
Finance income	24,29	1,074,445	913,158	852,304
Finance costs	24,29	(1,048,191)	(939,938)	(877,299)
Other income	25,26,29	10,357	45,941	42,879
Other expenses	25,26,29	(187,541)	(162,278)	(151,464)
<b>Profit for the year before tax</b>	3	<b>153,371</b>	<b>209,698</b>	<b>195,723</b>
Income tax expense	27	(29,662)	(59,317)	(55,364)
<b>Profit for the year</b>		<b>₩ 123,709</b>	<b>₩ 150,381</b>	<b>\$ 140,359</b>
<b>Other comprehensive income:</b>				
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>				
Net loss on valuation of available -for-sale financial assets	6,20,27,29	(1,293)	(7,746)	(7,230)
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>				
Re-measurement gain (loss) on defined benefit liabilities	16,27	(1,451)	662	618
<b>Other comprehensive loss for the year, net of tax</b>		<b>(2,744)</b>	<b>(7,084)</b>	<b>(6,612)</b>
<b>Total comprehensive income for the year, net of tax</b>		<b>₩ 120,965</b>	<b>₩ 143,297</b>	<b>\$ 133,747</b>
<b>Earnings per share</b>				
<b>(Korean won and U.S. dollar):</b>				
Basic	28	₩ 1,086	₩ 1,234	\$ 1.15
Diluted	28	₩ 1,086	₩ 1,234	\$ 1.15

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



**POSCO DAEWOO Corporation**  
**Separate statements of changes in equity**  
**for the years ended December 31, 2016 and 2017**

	Korean won in millions					U.S. dollar in thousands (Note 2)
	Accumulated					
	Issued capital	Capital surplus	Other components of equity	comprehensive income	Retained earnings	Total
<b>As at January 1, 2016</b>						
Profit for the year	₩ 569,381	₩ 333,161	₩ -	₩ 22,422	₩ 1,441,946	₩ 2,366,910
Net loss on valuation of available-for-sale financial assets	-	-	-	-	123,709	123,709
Re-measurement loss on defined benefit plans	-	-	-	(1,293)	-	(1,293)
<b>Total comprehensive income</b>	-	-	-	-	(1,451)	(1,451)
Dividends (Note 21)	-	-	-	(1,293)	122,258	120,965
<b>As at December 31, 2016</b>	₩ 569,381	₩ 333,161	₩ -	₩ 21,129	₩ 1,507,266	₩ 2,430,937
<b>As at January 1, 2017</b>						
Profit for the year	₩ 569,381	₩ 333,161	₩ -	₩ 21,129	₩ 1,507,266	₩ 2,430,937
Net loss on valuation of available-for-sale financial assets	-	-	-	-	150,381	150,381
Re-measurement gain on defined benefit plans	-	-	-	(7,746)	-	(7,746)
<b>Total comprehensive income</b>	-	-	-	-	661	661
Issuance of capital stock due to business combination (Note 31)	47,495	210,842	-	(7,746)	151,042	143,296
Acquisition of treasury stock	-	-	(6)	-	-	(6)
Dividends (Note 21)	-	-	-	-	(56,938)	(56,938)
<b>As at December 31, 2017</b>	₩ 616,876	₩ 544,003	₩ (6)	₩ 13,383	₩ 1,601,370	₩ 2,775,626
						\$ 2,590,653

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

**POSCO DAEWOO Corporation**  
**Separate statements of cash flows**  
**for the years ended December 31, 2016 and 2017**

	Korean won in millions		U.S. dollar in thousands (Note 2)
	2016	2017	2017
<b>Operating activities</b>			
Profit for the year	₩ 123,709	₩ 150,381	\$ 140,359
Non-cash adjustments to reconcile profit for the year to net cash flows:			
Depreciation of property, plant and equipment	16,822	34,905	32,579
Amortization of intangible assets	127,532	146,219	136,475
Depreciation of investment properties	2,908	2,920	2,725
Severance and retirement benefits	14,501	17,086	15,948
Bad debt expenses	40,357	75,929	70,869
Interest expenses	43,150	72,543	67,709
Loss on impairment of available-for-sale financial assets	182	-	-
Loss on disposal of available-for-sale financial assets	530	22	21
Gain on disposal of available-for-sale financial assets	(13)	(110)	(103)
Loss on impairment of investments in subsidiaries and associates	53,586	61,445	57,350
Gain on disposal of investments in subsidiaries and associates	-	-	-
Gain on disposal of disposal groups classified as held for sale	-	(465)	(434)
Loss on foreign currency translation	123,986	167,414	156,257
Loss on settlement of derivatives	267,605	215,976	201,583
Loss on valuation of derivatives	59,009	75,501	70,469
Other bad debt expenses	43,352	3,762	3,511
Loss on disposal of property, plant and equipment	1	476	444
Loss on disposal of intangible assets	-	98	91
Loss on impairment of intangible assets	13,816	74,961	69,965
Income tax expense	29,662	59,317	55,364
Loss on valuation of inventories	612	661	617
Financial guarantee expenses	22,777	7,434	6,939
Contribution to provision for contingencies	32,592	9,335	8,713
Contribution to provision for restoration	345	241	225
Interest income	(35,400)	(29,783)	(27,798)
Dividend income	(70,647)	(53,180)	(49,636)
Gain on foreign currency translation	(122,493)	(160,736)	(150,024)
Gain on settlement of derivatives	(252,895)	(188,645)	(176,073)
Gain on valuation of derivatives	(71,723)	(90,897)	(84,839)
Reversal of other allowance for doubtful accounts	(488)	(464)	(433)
Gain on disposal of property, plant and equipment	(151)	(1,441)	(1,345)
Gain on disposal of intangible assets	(83)	-	-
Reversal of loss on valuation of inventories	(607)	(6,561)	(6,124)
Financial guarantee income	(869)	(1,888)	(1,762)

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**POSCO DAEWOO Corporation**  
**Separate statements of cash flows**  
**for the years ended December 31, 2016 and 2017 (cont'd)**

	Korean won in millions		U.S. dollar in thousands (Note 2)
	2016	2017	2017
Working capital adjustments:			
Trade receivables	₩ (42,700)	₩ 244,252	\$ 227,975
Other current receivables	(27,166)	4,223	3,942
Other current assets	(24,891)	(31,380)	(29,289)
Inventories	(37,436)	(147,549)	(137,716)
Derivative financial assets	25,069	(48,351)	(45,129)
Other non-current receivables	60,984	620	579
Trade accounts payable	513,654	(254,197)	(237,257)
Other current payables	(51,893)	22,480	20,982
Other current liabilities	53,913	7,443	6,947
Other non-current payables	(13,429)	(99)	(92)
Provision for restoration	-	(2,232)	(2,083)
Payment of severance benefit	(2,256)	(412)	(385)
Contribution to plan assets	(24,995)	(26,800)	(25,014)
Interest received	31,571	31,958	29,828
Dividends received	74,374	53,032	49,498
Interest paid	(56,405)	(79,670)	(74,361)
Income tax paid	(90,455)	(68,035)	(63,502)
<b>Net cash flows provided by operating activities</b>	<b>849,604</b>	<b>347,739</b>	<b>324,565</b>
<b>Investing activities</b>			
Decrease (increase) in short-term financial instruments	(1,663)	13,061	12,191
Increase in long-term financial instruments	-	(9)	(8)
Decrease in long-term financial instruments	2	5	5
Proceeds from disposal of available-for-sale financial assets	773	110	103
Proceeds from disposal of investments in subsidiaries	1	-	-
Decrease in long-term other receivables	1,720	36	34
Increase in long-term other receivables	(23,225)	(21,349)	(19,926)
Decrease (increase) in guarantee deposits	(10)	254	237
Decrease in long-term guarantee deposits	-	616	575
Increase in long-term guarantee deposits	(56)	(2,226)	(2,078)
Proceeds from disposal of property, plant and equipment	255	1,464	1,366
Proceeds from disposal of intangible assets	200	201	188
Increase in short-term loans receivable	(67)	(684)	(638)
Decrease (increase) in current portion of long-term loans receivable	47,141	(43,860)	(40,937)
Decrease (increase) in long-term loans receivable	(40,109)	55,998	52,266
Acquisition of available-for-sale financial assets	(1,778)	(300)	(280)
Acquisition of subsidiaries	(8,527)	(139,438)	(130,146)
Acquisition of property, plant, and equipment	(2,447)	(18,521)	(17,287)
Acquisition of intangible assets	(60,536)	(101,364)	(94,609)
Proceeds from disposal of disposal groups classified as held for sale	-	717	669
Increase of net cash flows due to business combination	-	22,150	20,674
Decrease in capital lease payment receivables	-	104	96
<b>Net cash flows used in investing activities</b>	<b>(88,326)</b>	<b>(233,035)</b>	<b>(217,505)</b>

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**POSCO DAEWOO Corporation**  
**Separate statements of cash flows**  
**for the years ended December 31, 2016 and 2017 (cont'd)**

	<b>Korean won in millions</b>		<b>U.S. dollar in</b>
	<b>2016</b>	<b>2017</b>	<b>2017</b>
<b>Financing activities</b>			
Issuance of bonds	₩ 149,483	₩ 338,150	\$ 315,615
Redemption of bonds	(350,000)	(284,044)	(265,115)
Decrease in short-term borrowings	(439,514)	(220,704)	(205,996)
Proceeds from long-term borrowings	-	243,509	227,281
Repayment of long-term borrowings	(102,817)	(132,208)	(123,397)
Dividends paid	(56,938)	(56,938)	(53,144)
Payment of financial lease liabilities	(1,028)	(796)	(743)
Acquisition of treasury stock	-	(6)	(6)
<b>Net cash flows used in financing activities</b>	<b>(800,814)</b>	<b>(113,037)</b>	<b>(105,505)</b>
Net increase (decrease) in cash and cash equivalents	(39,536)	1,667	1,555
Cash and cash equivalents at January 1	83,431	43,922	40,995
Net foreign exchange difference	27	(1,239)	(1,156)
<b>Cash and cash equivalents at December 31</b>	<b>₩ 43,922</b>	<b>₩ 44,350</b>	<b>\$ 41,394</b>

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

## **1. Corporate information**

POSCO DAEWOO Corporation (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 providing export services, export agency services, intermediary trading, manufacturing, natural resource development and lease service. The primary products sold by the Company include various industrial grade steel, metals, chemicals, automobile parts, machinery, ships, plants, electronics, special materials, grains and petroleum.

The Company listed its shares on the Korea Exchange on March 23, 2001. The Company’s capital stock as at December 31, 2017 is ₩616,876 million as a result of shares issued for the merge with the steel business segment of POSCO P&S. POSCO, the Company’s largest shareholder, owns 62.90% equity interest in the Company.

## **2. Basis of preparation and summary of significant accounting policies**

### **2.1 Basis of preparation**

The Company prepares statutory financial statements in the Korean language in accordance with *Korean International Financial Reporting Standards* (KIFRS) enacted by the *Act on External Audit of Stock Companies*. The accompanying separate financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors’ report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

The separate financial statements have been prepared on a historical cost basis, except for derivative financial instruments, available-for-sale financial assets and others 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 separate 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 2017 separate 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 ₩1,071.4 to USD 1, the year-end exchange rate on December 31, 2017. 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.

### **2.2 Summary of significant accounting policies**

#### **2.2.1 Subsidiaries, associates and jointly controlled entities**

Pursuant to KIFRS 1027, the accompanying separate financial statements are accounted for, by a parent, investor in an associate on the basis of the direct equity interest rather than on the basis of the reported results and net assets of the investees. Moreover, KIFRS 1027 requires that, in separate financial statements, investments in subsidiaries or associates should be accounted for at cost. All dividends should be recognized in profit or loss within separate financial statements once the right to receive payment has been established.

## **2.2.2 Current versus non-current classification**

The Company 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 Company classifies all other liabilities as non-current.

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

## **2.2.3 Fair value measurement**

The Company 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:

	Notes
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 Company.

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 Company 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.

### **2.2.3 Fair value measurement (cont'd)**

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 Company 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 Company 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.

### **2.2.4 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 Company 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.

#### **2.2.4.1 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 Company acts as an agent without assuming the risks and rewards of ownership of the goods is recognized on a net basis.

#### **2.2.4.2 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.

#### **2.2.4.3 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.

#### **2.2.4.4 Dividends**

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

## **2.2.5 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 a maturity of three months or less, which are subject to an insignificant risk of changes in value.

## **2.2.6 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 Company 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 Company determines the classification of its financial assets at initial recognition.

### **2.2.6.1 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 net changes in fair value presented as finance costs (negative net changes in fair value) or finance income (positive net changes in fair value) in the statement of profit or loss and other comprehensive income. Transaction costs attributable to the acquisition of the financial asset at fair value through profit or loss are charged to current operation.

### **2.2.6.2 Held-to-maturity investments**

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Company 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 effective interest rate (EIR), less impairment. The EIR amortization is included as finance income in the statement of profit or loss and other comprehensive income. The losses arising from impairment are recognized in the statement of profit or loss and other comprehensive income as finance costs.

### **2.2.6.3 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 investments are subsequently measured at fair value with unrealized gains or losses recognized in other comprehensive income (OCI) and credited in the AFS reserve 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 AFS reserve to the statement of profit or loss and other comprehensive income in finance costs. Dividends income earned whilst holding AFS financial investments is reported when the Company's right to receive the payment is established.

### **2.2.6.4 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 the EIR method, less impairment. The EIR amortization is included in finance income in the statement of profit or loss and other comprehensive income.



#### **2.2.6.5 Impairment of financial assets**

The Company assesses, at each reporting date, whether there is objective evidence that a financial asset or a group of financial assets is impaired. An impairment exists if one or more events that has occurred since the initial recognition of the asset (an incurred '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 would include a significant or prolonged decline in the fair value of the investment below its cost.

For financial assets carried at amortized cost, the Company 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 Company'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 investment classified as available-for-sale is not reversed through profit or loss.

#### **2.2.6.6 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 Company's statement of financial position) when:

- The rights to receive cash flows from the asset have expired, or
- The Company 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 Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Company 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 Company continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

When the Company has transferred its rights to receive cash flows from an asset but has neither transferred nor retained substantially all of the risks and rewards of the asset, but has control of the asset, the Company continues to recognize the transferred asset to the extent of its continuing involvement. In case, the Company continues its involvement in the asset by providing guarantees, the continuous involvement is measured at the lower of the initial book value of the asset and the maximum amount that is required to be repaid in the consideration received. In such case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

### **2.2.7 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.

### **2.2.8 Non-current assets held for sale and discontinued operations**

The Company classifies non-current assets and disposal groups classified 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 coordinated 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 profit or loss and other comprehensive income.

### **2.2.9 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 Company, 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.

## 2.2.9 Property, plant and equipment (cont'd)

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, as follows:

	Years
Buildings	40~50
Machinery	4~25
Others	4~5

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

## 2.2.10 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 Company 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 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.

## 2.2.11 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.

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. 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.

## **2.2.12 Exploration and evaluation assets, development assets and mining rights**

The Company 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:

### **2.2.12.1 Exploration and evaluation assets**

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

### **2.2.12.2 Development assets**

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

### **2.2.12.3 Mining rights**

Mining rights (production fields) consist of expenditures 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.

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

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, the Company 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 statement of comprehensive income.

## **2.2.14 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 fulfilment 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.

#### **2.2.14.1 Company as a lessee**

Finance leases that transfer substantially all the risks and benefits incidental to ownership of the leased item to the Company, 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 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 Company 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 statement of comprehensive income on a straight-line basis over the lease term.

#### **2.2.14.2 Company as a lessor**

Leases in which the Company 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.

#### **2.2.15 Foreign currency translation**

These financial statements are presented in Korean won, which is the Company's functional currency and the currency of the primary economic environment in which the Company operates.

At the end of each reporting period, foreign currency monetary items are translated using the closing rate. Exchange differences arising on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements are recognized in profit or loss in the period in which they arise.

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.

#### **2.2.16 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. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

#### **2.2.17 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, 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.

#### **2.2.18 Financial liabilities and equity instrument**

Debts and equity instruments issued by the Company are classified based on the substance of the contracts as financial liabilities and equity.

#### **2.2.18.1 Equity instruments**

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

#### **2.2.18.2 Financial guarantee contracts**

Financial guarantee contracts issued by the Company 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 best estimate of the expenditure required to settle the present obligation at the reporting date and the amount recognized less cumulative amortization.

#### **2.2.18.3 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. This category includes derivative financial instruments entered into by the Company that are not designated as hedging instruments. Gains or losses on liabilities held for trading are recognized in profit or loss.

#### **2.2.18.4 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.

#### **2.2.18.5 Derecognition**

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

#### **2.2.19 Severance benefit**

The Company 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 (not applicable to the Company) 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.

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 Company recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Company 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

## **2.2.20 Taxes**

### **2.2.20.1 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 Company operates and generates taxable income.

### **2.2.20.2 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.

#### **2.2.20.2 Deferred tax (cont'd)**

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.

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.

### **2.2.20.3 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 Company 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.

### **2.2.21 Provisions**

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

### **2.2.22 Derivatives**

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, 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 Company formally designates and documents the hedge relationship to which the Company 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.

#### **2.2.22.1 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.

#### **2.2.22.2 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 host contract and the embedded derivatives are not closely related to those of the host contract, (b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and (c) the hybrid (combined) instrument is not measured at fair value through profit or loss.



## **2.3 Significant accounting judgments, estimates and assumptions**

The preparation of the Company'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 Company's exposure to risks and uncertainties are disclosed in Note 29, which includes:

- Capital management (Notes 29.1)
- Financial instruments risk management (Notes 29)
- Sensitivity analysis disclosures (Notes 29)

The key assumptions concerning the future and other key sources of estimation and 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 Company 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 Company estimates the asset's recoverable amount. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually. To estimate the value in use, management estimates future cash flows from the assets or CGU and determines 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 measurement of financial instruments**

When 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 Company applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2017. The nature and the impact of each new standard and amendment are described below:

### **Amendments to KIFRS 1007 *Statement of Cash Flows: Disclosure Initiative***

The amendments require entities to provide disclosure of changes in their liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes (such as foreign exchange gains or losses). The Company has provided the information for both the current and the comparative period in Note 29.

### **Amendments to KIFRS 1012 *Income Taxes: 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 deductible temporary difference related to unrealized losses. 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. However, their application has no effect on the Company's financial statements as the Company has no deductible temporary differences or assets that are in the scope of the amendments.

### **Amendments to KIFRS 1112 *Disclosure of Interests in Other Entities: Clarification of the scope of disclosure requirements in KIFRS 1112***

The amendments clarify that the disclosure requirements in KIFRS 1112, other than those in paragraphs B10–B16, apply to an entity's interest in a subsidiary, a joint venture or an associate (or a portion of its interest in a joint venture or an associate) that is classified (or included in a disposal company that is classified) as held for sale. The amendments do not have any impact on the Company's financial statements.

## 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 Company's financial statements are disclosed below.

### **KIFRS 2122 *Foreign Currency Transactions and Prepaid Payment or Receipts in Advance Consideration***

The Interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to prepaid payment or receipts in advance consideration, the date of the transaction is the date on which an entity initially recognize the non-monetary asset or non-monetary liability arising from prepaid payment or receipts in advance consideration. If there are multiple prepaid payment or receipts in advance, then the entity must determine the transaction date for each prepaid payment or receipts in advance consideration.

The Interpretation is effective for annual periods beginning on or after January 1, 2018. Early application of interpretation is permitted. However, since the Company's current practice is in line with the Interpretation, the Company does not expect any significant effect on its financial statements.

### **KIFRS 1109 *Financial Instruments***

In September 2015, The KASB issued the final version of KIFRS 1109 Financial Instruments that replaces KIFRS 1039 Financial Instruments: Recognition and Measurement and all previous versions of KIFRS 1109. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. KIFRS 1109 is effective for annual periods beginning on or after January 1, 2018, with early application permitted. The Company plans to adopt the new standard on the required effective date.

Under the standard, retrospective application is required, but providing comparative information is not compulsory for certain cases such as classification and measurement of financial instruments, and impairment. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions such as accounting for time value of options.

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

The main features of the standard 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 the standard 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 Company's financial instruments and economic conditions during the period.

The Company is preparing for its internal control procedures, or the accounting system related to the adoption of KIFRS 1109, and will analyze the financial impact of KIFRS 1109 on its separate financial statements. General impacts on the company's financial statements upon the adoption of the standard are as follows;

### **(i) Classification and measurement of financial assets**

KIFRS 1109 requires financial instruments to be classified as financial instruments subsequently measured at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. Hybrid contracts with hosts that are assets, are classified in their entirety instead of bifurcating the embedded derivatives.

Objective of the business model	Characteristics of contractual cash flows	
	Composed solely of principal and interest	Others
Collecting contractual cash flows	Subsequently measured at amortized cost	FVTPL
Collecting contractual cash flows and selling	FVOCI	
Selling or other purposes	FVTPL	

According to KIFRS 1109, an entity may make an irrevocable election to present in other comprehensive income changes in the fair value of an investment in an equity instrument that is not held for trading. Items of comprehensive income are not subsequently recycled to profit or loss.

According to KIFRS 1109, a financial asset whose contractual terms do not give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding, or a debt instrument that is held for trading, or an equity instrument that is not designated as a financial asset measured at FVOCI, are measured at FVTPL.

As of the end of the reporting period, equity instruments classified as available-for-sale financial instruments are presented in Note 6. In accordance with KIFRS 1109, the Company has elected to measure the investments at FVOCI and FVTPL. As of the initial application date (January 1, 2018), retained earnings will increase by ₩10,946 million (\$10,217 thousand) due to the change in classification.

### **(ii) Classification and measurement of financial liabilities**

Under KIFRS 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 KIFRS 1039, are presented in other comprehensive income; therefore, gains and losses on valuation of financial liabilities may decrease.

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

### (iii) Impairment: financial assets and contract assets

Under KIFRS 1039, impairment losses are recognized when there is objective evidence of impairment based on the incurred loss model. However, under KIFRS 1109, impairment losses are recognized on debt instruments, lease receivables, contract assets, loan commitment, and financial guarantee contracts that were accounted for at amortized cost, or FVOCI, based on the expected credit loss (ECL) impairment model.

KIFRS 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 KIFRS 1039

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

(\*1) For trade receivables or contract assets that arise from transactions within the scope of KIFRS 1115 *Revenue from Contracts with Customers* and that do not contain a significant financing component, loss allowance is measured at an amount equal to lifetime expected credit losses. If the trade receivables or contract assets contain a significant financial component, a policy election may be made such that the loss allowance is measured at an amount equal to lifetime expected credit losses. Also, for lease receivables, a policy election may be made such that the loss allowance is measured at an amount equal to lifetime expected credit losses.

(\*2) Low credit risk at the reporting date may be deemed as no significant increase in credit risk.

Under KIFRS 1109, the cumulative changes in lifetime expected credit losses since initial recognition are recognised as loss allowance for a financial asset that is considered credit-impaired at initial recognition.

As at December 31, 2017, Trade and other receivables and available-for-sale financial assets designated as measured at amortized cost are described in Note 5.

For trade receivables, which contain a significant financing component, the Company measures the loss allowance at an amount equal to lifetime expected credit losses. If the Company applies a practical expedient under which low credit risk at the reporting date may be deemed as no significant increase in credit risk, the loss allowance will increase by ₩592 million (\$553 thousand) and the retained earnings will decrease by ₩449 million (\$419 thousand) as of January 1, 2018.

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

### (iv) Hedge accounting

KIFRS 1109 applies mechanics of hedge accounting (fair value hedge accounting, cash flow hedge, foreign entities net investment hedge) specified in the current KIFRS 1039. However, the Company changed from the complex and rule-based hedge accounting requirements of KIFRS 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 KIFRS 1109, some transactions that do not meet the criteria for hedge accounting of the current KIFRS 1039 may be accounted for using the hedge accounting; therefore, volatility in profit or loss may be reduced.

As at December 31, 2017, Details of the assets, liabilities and firm commitment contracts for which the Company applies hedge accounting are described in Note 18.

The Company can elect to continue to apply the current KIFRS 1039 hedge accounting requirements upon initial application of KIFRS 1109.

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

KIFRS 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 KIFRS: KIFRS 1018 *Revenue*, KIFRS 1011 *Construction Contracts*, KIFRS 2031 *Revenue-Barter Transactions Involving Advertising Services*, KIFRS 2113 *Customer Loyalty Programmes*, KIFRS 2115 *Agreements for the Construction of Real Estate*, and KIFRS 2118 *Transfers of Assets from Customers*. The Company plans to apply KIFRS 1115 beginning on or after January 1, 2018 and the cumulative effect of the first application will be applied on the first application date, January 1, 2018, as an appropriation of retained earnings.

The current KIFRS 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 KIFRS 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.

#### (1) Determination of the transaction price

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 of consideration is estimated at the expected value or the most likely amount.

Upon application of KIFRS 1115, the Company estimates the variable consideration using the method that better predicts the amount of consideration to be received. The Company recognizes revenue by including the variable consideration in the transaction price only to the extent that it is highly probable that a significant reversal in the cumulative revenue recognized will not occur.

#### (2) Allocation of 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 stand-alone selling price. Suitable methods for estimating the stand-alone selling price of a good or service include, but are not limited to, the following:

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

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.

In the application of KIFRS 1115, performance obligation is identified from (1) sales of goods and (2) transportation services from trading with customer. The Company plans to recognize the revenue on the transaction prices allocated to each performance obligation by applying expected cost plus a margin approach for the estimated costs when the obligation is performed. If performance obligation is separated, retained earnings will decrease by ₩365 million (\$341 thousand) as at January 1, 2018, the initial application date.

(3) Performance obligation satisfied over time: equipment.

In accordance with KIFRS 1115, the percentage of completion (POC) method is applied for revenue recognition if an entity does not have an alternative use of the assets manufactured to perform the obligation and the entity has the enforceable right to payment for performance completed. As a result of analyzing the terms and conditions of the contract for equipment manufactured after order, the Company does not have enforceable right to payment for performance completed. If the percentage of completion is not applied, retained earnings will decrease by ₩448 million (\$418 thousand) as at January 1, 2018.

The Company's accounting policies may change until the end of the first quarter of 2018 on which the financial statements after the initial application date are disclosed for the first time. Accordingly, the financial impact based on the accounting standard above may differ from the financial information after the initial application date included in the financial statements for the first quarter of 2018.

### **Amendments to KIFRS 1110 and KIFRS 1028 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture***

The amendments address the conflict between KIFRS 1110 and KIFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in KIFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The IASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. These amendments are not expected to have any impact on the Company.

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

### **KIFRS 1116 Leases**

KIFRS 1116 was issued in January 2016 and it replaces KIFRS 1017 *Leases*, KIFRS 2104 *Determining whether an Arrangement contains a Lease*, KIFRS 2015 *Operating Leases-Incentives* and KIFRS 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*. KIFRS 1116 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under KIFRS 1017. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g., personal computers) and short-term leases (i.e., leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognise a liability to make lease payments (i.e., the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset). Lessees will be required to separately recognise the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognise the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

Lessor accounting under KIFRS 1116 is substantially unchanged from today's accounting under KIFRS 1017. Lessors will continue to classify all leases using the same classification principle as in KIFRS 1017 and distinguish between two types of leases: operating and finance leases.

KIFRS 1116 also requires lessees and lessors to make more extensive disclosures than under KIFRS 1017. KIFRS 1116 is effective for annual periods beginning on or after January 1, 2019. Early application is permitted, but not before an entity applies KIFRS 1115. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs.

### **Amendments to KIFRS 1040 Transfers of Investment Property**

The amendments clarify when an entity should transfer property, including property under construction or development into, or out of investment property. The amendments state that a change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. A mere change in management's intentions for the use of a property does not provide evidence of a change in use. Entities should apply the amendments prospectively to changes in use that occur on or after the beginning of the annual reporting period in which the entity first applies the amendments. An entity should reassess the classification of property held at that date and, if applicable, reclassify property to reflect the conditions that exist at that date. Retrospective application in accordance with KIFRS 1008 is only permitted if it is possible without the use of hindsight. These amendments are effective for annual periods beginning on or after January 1, 2018. Early application of the amendments is permitted and must be disclosed. The Company will apply these amendments on the required effective date.

### **KIFRS 1102 Classification and Measurement of Share-based Payment Transactions — Amendments to KIFRS 1102**

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

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 January 1, 2018, with early application permitted. The Company expects that the amendments would not have an impact on its financial statements.

## 2.6 Date of authorization for issue

The financial statements of the Company for the year ended December 31, 2017 were authorized at the meeting of the Board of Directors held on January 26, 2018 and scheduled to be approved at the shareholders' meeting to be held on March 12, 2018.

### 3. Segment information

#### 3.1 Operating segment

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

The financial performance and financial position of each segment for the year ended December 31, 2017 are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)
	Trading	Natural resource development	Others	Total	Total
Sales	₩ 20,316,844	₩ 561,450	₩ 13,232	₩ 20,891,526	\$ 19,499,278
Profit (loss) for the year before tax	61,579	145,100	3,019	209,698	195,723
Total asset	5,089,480	2,684,010	207,477	7,980,967	7,449,101
Total liabilities	3,746,019	409,282	8,012	4,163,313	3,885,862

#### 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 millions	U. S. dollar in thousands
	2017	2017
Segment operating assets	₩ 7,980,967	\$ 7,449,101
Current tax assets	-	-
Deferred tax assets	200,675	187,302
Total assets	₩ 8,181,642	\$ 7,636,403

Reconciliation of liabilities is as follows:

	Korean won in millions	U. S. dollar in thousands
	2017	2017
Segment operating liabilities	₩ 4,163,313	\$ 3,885,862
Current tax liabilities	44,767	41,784
Current portion of bonds	463,736	432,832
Bonds	734,200	685,272
Total liabilities	₩ 5,406,016	\$ 5,045,750



### 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, 2017 and non-current assets as at December 31, 2017 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
Total sales	₩ 3,640,222	₩ 5,860,675	₩ 3,383,456	₩ 1,346,381	₩ 6,660,792	₩ 20,891,526	\$ 19,499,278
Non-current assets(*1)	654,472	1,607,012	81	-	1,828	2,263,393	2,112,556

(\*1) Consist of PP&E, intangible assets and investment properties.

### 4. Cash and cash equivalents

Cash and cash equivalents as at December 31, 2017 and 2016 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Savings account and checking account	₩ 35,255	₩ 35,583	\$ 33,212
Other cash equivalents:	8,667	8,767	8,182
	₩ 43,922	₩ 44,350	\$ 41,394

### 5. Trade and other receivables

Trade and other receivables as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Current:			
Trade receivables	₩ 3,455,982	₩ 3,479,185	\$ 3,247,326
Allowance for doubtful accounts	(86,521)	(61,748)	(57,633)
Other receivables	104,110	50,286	46,935
Allowance for doubtful accounts	(67,222)	(19,513)	(18,213)
Short-term guarantee deposits	514	400	373
Short-term loans receivable	36,845	33,409	31,183
Allowance for doubtful accounts	(18,143)	(16,087)	(15,015)
Current portion of long-term loans receivable	69,149	52,330	48,843
	3,494,714	3,518,262	3,283,799
Non-current:			
Long-term trade receivables	2,354	93,212	87,000
Allowance for doubtful accounts	-	(84,827)	(79,174)
Long-term loans receivable	394,866	346,360	323,278
Present value discount for long-term loans receivable	-	(4,702)	(4,389)
Long-term other receivables	53,675	69,492	64,861
Allowance for doubtful accounts	(5,893)	(14,567)	(13,596)
Long-term guarantee deposits	4,171	7,849	7,326
	449,173	412,817	385,306
	₩ 3,943,887	₩ 3,931,079	\$ 3,669,105

#### 5.1 Allowance for doubtful accounts

Changes in allowance for doubtful accounts related to trade receivables for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Beginning balance	₩ 51,615	₩ 86,521	\$ 80,755
Increase due to business combination	-	25,717	24,003
Bad debt expenses	40,357	76,052	70,984
Write-off	(6,965)	(36,746)	(34,297)
Foreign exchange translation loss(profit)	1,514	(4,969)	(4,638)
Ending balance	₩ 86,521	₩ 146,575	\$ 136,807

## 5.2 Financial assets transferred but not derecognized

As at December 31, 2017, trade receivables transferred with a book value amounting to ₩795,459 million (\$742,448 thousand) are not derecognized. Cash received through factoring of such receivables is accounted for as short-term borrowings.

The Company factored the above trade receivables to financial institutions with recourse. The Company 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, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Deposits in financial institutions	₩ 3,083	₩ 4	\$ 4
Short-term financial Instruments	-	80	74
	₩ 3,083	₩ 84	\$ 78

Other non-current financial assets as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Deposits in financial institutions	₩ 8	₩ 12	\$ 11
Available-for-sale financial assets	98,705	88,888	82,964
Held-to-maturity investments	-	695	649
	₩ 98,713	₩ 89,595	\$ 83,624

**POSCO DAEWOO Corporation**  
**Notes to the separate financial statements**  
**December 31, 2016 and 2017**

**6. Other financial assets (cont'd)**

Available-for-sale financial assets as at December 31, 2016 and 2017 are as follows:

	Korean won in millions						U. S. dollar in thousands (Note 2)
	2016		2017				2017
	Book value	Number of shares	Equity ownership (%)	Acquisition cost	Fair value or net asset value	Book value	Book value
<u>Marketable securities:</u>							
Maruichi Steel Tube Ltd.	₩ 4,734	120,000	0.12	₩ 2,933	₩ 3,758	₩ 3,758	\$ 3,508
TK-Chemical Co., Ltd.	15,360	8,000,000	8.80	14,818	15,641	15,641	14,599
IQ Power Licensing AG	526	5,119,129	1.90	679	386	386	360
	20,620			18,430	19,785	19,785	18,467
<u>Non-marketable securities:</u>							
The Korea Economic Daily	974	178,881	0.96	1,952	2,102	974	909
Erae-automotive system Co., Ltd.	26,725	917,760	7.70	4,589	8,906	8,906	8,312
Erae AMS Co., Ltd.	-	917,760	7.70	4,589	8,906	8,906	8,312
Hanil Daewoo Cement Mfg Co., Ltd.	-	300,000	15.00	1,500	(1,538)	-	-
CES Co., Ltd.	600	156,000	5.34	600	132	600	560
Central Corporation	10,157	100,474	10.89	1,859	9,683	9,683	9,038
Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No. 1	103	-	2.13	263	106	106	99
Hanmi ADM Co., Ltd.	1,000	10,000	16.67	1,000	1,629	1,000	933
Miju Steel Mfg Co., Ltd.	-	909,391	1.49	182	(337)	-	-
DAEWOO Display Corp.	-	39,403	6.72	-	422	-	-
S&S Metal Co., Ltd.	1,000	26,390	8.47	1,000	454	1,000	934
KG Power (M) Sdn. Bhd.	-	1,457,847	6.69	45	-	-	-
IQ Power Asia Corp.	-	735,976	14.18	4,053	161	-	-
DAEWOO (M) Sdn. Bhd.	-	-	-	48	-	-	-
Shinpoong Daewoo Pharma Co., Ltd.	343	-	3.42	343	351	343	320
CJ Philippines INC.	349	109,200	10.00	349	2,966	349	326
K.K.Korea Kamchatka Co.Limited	-	328	10.00	-	-	-	-
POSCO-Malaysia Sdn. Bhd.	7,577	24,128,000	13.63	7,905	(1,278)	7,577	7,072
Dongjin Vietnam Co., Ltd.	803	20,000	10.00	803	-	803	749
POSCO Assan TST Steel Industry A.S.	15,460	24,096,526	10.00	15,460	(5,178)	15,460	14,430
DAEWOO El Salvador S.A. DE C.V.	-	31,262	88.00	3,021	-	-	-
Erae Automotive Systems Mexico	478	-	19.00	478	818	478	446
POSCO-ITPC S.P.A	781	-	10.00	781	971	781	729
Hunchun Pohang Hyundai International Logistics Complex Development Co., Ltd.	10,732	-	10.00	10,732	8,896	10,732	10,017
TES MI S.R.O.	523	-	3.00	523	-	523	488
JILIN KDAC Co., Ltd.	176	-	7.00	176	-	176	164
POSCO Agricultural Products Export Fund	300	-	10.00	600	554	600	560
ZYLE DAEWOO Motor Sales Corp.	2	401	-	2	-	2	2
DW Development Co. Ltd- Engineering & Construction (Common Share)	1	70	-	1	-	1	1
DW Development Co. Ltd- Engineering & Construction (Preferred Share)	1	70	-	1	-	1	1

**6. Other financial assets (cont'd)**

	Korean won in millions					U. S. dollar in thousands (Note 2)	
	2016	2017				2017	
	Book value	Number of shares	Equity ownership (%)	Acquisition cost	Fair value or net asset value	Book value	Book value
N.I.Co.,Ltd.	₩ -	-	50.00	₩ 3,099	₩ -	₩ -	\$ -
Korea Dic & Mold Industry Cooperative	-	-	-	1	-	1	1
Korea Speciality Contractor Finanacial Cooperative	-	-	-	101	-	101	94
Others	-			26	532	-	-
	<u>78,085</u>			<u>66,082</u>	<u>39,258</u>	<u>69,103</u>	<u>64,497</u>
	<u>₩ 98,705</u>			<u>₩ 84,512</u>	<u>₩ 59,043</u>	<u>₩ 88,888</u>	<u>\$ 82,964</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, 2017. Investment in Erae-automotive system Co., Ltd., Erae AMS Co.,Ltd and Central Corporation were stated at fair value of ₩9,704 per share and ₩96,378 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, 2017. The resulting unrealized gains arising from fair value adjustments on available-for-sale financial assets amounting to ₩13,383 million (\$12,491 thousand) were recorded in accumulated other comprehensive income, net of deferred income tax effect (liability) of ₩4,273 million (\$3,988 thousand).

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

**7. Other current assets**

Other current assets as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
	₩	₩	\$
Advance payments	79,212	112,044	104,577
Allowance for doubtful accounts	(3,463)	(956)	(892)
Prepaid expenses	1,719	3,348	3,125
	<u>₩ 77,468</u>	<u>₩ 114,436</u>	<u>\$ 106,810</u>

## 8. Inventories

Inventories as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Merchandise	₩ 317,666	₩ 549,828	\$ 513,186
Valuation allowance	(5,798)	(641)	(598)
Finished goods	-	17,525	16,357
Valuation allowance	-	(1,727)	(1,612)
Semifinished goods and Works in process	-	21,603	20,163
Valuation allowance	-	(502)	(469)
Raw materials	-	44,850	41,861
Valuation allowance	-	(1,049)	(979)
Materials-in-transit	44,020	96,620	90,181
Others	1,749	6,105	5,700
	<u>₩ 357,637</u>	<u>₩ 732,612</u>	<u>\$ 683,790</u>

The loss on valuation of inventories and the reversal of loss on valuation of inventories, which were recorded as costs of sales in 2017, amounted to ₩297 million (\$277 thousand) and ₩6,197 million (\$5,784 thousand), respectively.

## 9. Investments in subsidiaries and associates

Investments in subsidiaries and associates as at December 31, 2016 and 2017 are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)
	2016		2017		2017
	Equity ownership (%)	Book value	Equity ownership (%)	Book value	Book value
<Subsidiaries>					
POSCO DAEWOO America Corp.	100.00	₩ 29,590	100.00	₩ 29,590	\$ 27,618
POSCO DAEWOO Deutschland GmbH	100.00	9,724	100.00	9,724	9,076
POSCO DAEWOO Japan Corp.	100.00	4,729	100.00	4,729	4,414
POSCO DAEWOO Singapore Pte Ltd.	100.00	3,711	100.00	3,711	3,464
POSCO DAEWOO Italia S.R.L.	100.00	3,621	100.00	3,621	3,380
POSCO DAEWOO Mexico S.A. de C.V.	100.00	2,905	100.00	2,905	2,711
POSCO DAEWOO Shanghai Co.,Ltd.	100.00	8,807	100.00	8,807	8,220
POSCO DAEWOO Malaysia Sdn Bhd	100.00	2,192	100.00	2,192	2,046
POSCO DAEWOO India Pvt.,Ltd.	100.00	2,299	100.00	2,299	2,146
DAEWOO Textile LLC	100.00	24,808	100.00	24,808	23,155
POSCO DAEWOO China Co.,Ltd.	100.00	16,009	100.00	16,009	14,942
POSCO DAEWOO Australia Holdings Pty. Ltd.(*6)	100.00	125,009	100.00	124,422	116,130
DAEWOO AAPC Corp.	100.00	5,027	100.00	5,027	4,692
Brasil Saopaulo Steel Processing Center	51.00	-	51.00	-	-
PT. Bio Inti Agrindo	85.00	48,984	85.00	53,905	50,313
POS-SEA(*1)	-	-	100.00	-	-
POS-GSFC(*1)	-	-	97.80	7,314	6,827
Pohang Scrap Recycling Distribution Center Co., Ltd. (*1)	-	-	51.00	7,610	7,103
Golden Lace DAEWOO Company Limited.(*3)	-	-	60.00	6,781	6,329
POSCO DAEWOO Ukraine, LLC.(*3)	-	-	100.00	113	105
POSCO DAEWOO Vietnam Co.,Ltd.	100.00	4,613	100.00	4,613	4,306
POSCO DAEWOO Myanmar Corporation Ltd.	100.00	5,403	100.00	5,403	5,043
POSCO DAEWOO E&P Canada Corp.(*6)	100.00	5,022	100.00	-	-
KIS Devonian Canada Corporation(*5)(*6)	-	-	100.00	44,427	41,466
DAEWOO Power PNG Ltd.	100.00	14,686	100.00	14,686	13,707

**9. Investments in subsidiaries and associates (cont'd)**

	Korean won in millions				U. S. dollar in thousands (Note 2)
	2016		2017		2017
	Equity ownership (%)	Book value	Equity ownership (%)	Book value	Book value
Kwanika UJV (formerly, DAEWOO Minerals Canada Corporation)	100.00	1,201	-	-	-
POSCO DAEWOO Power(PNGPOM) Ltd.(*6)	100.00	11,889	100.00	10,053	9,383
DAEWOO Global Development Pte. Ltd.	-	-	55.50	49,344	46,056
DAEWOO Power And Infra (Pty) Ltd.	100.00	1	100.00	1	1
DAEWOO Precious Resources Co.,Ltd.(*6)	70.00	6,638	70.00	4,841	4,518
LA SRDC(*1)	-	-	85.70	150	140
		336,868		447,085	417,291
<Associates>					
Blue Ocean Recovery PEF No. 1	27.52	33,300	27.50	33,300	31,081
POSCO Mexico Processing Center Holding, LLC(*2)	26.70	11,509	19.64	11,509	10,742
POSCO-ESDC Ltd.	20.00	1,160	20.00	1,160	1,083
POSCO IJPC	20.00	4,665	20.00	4,665	4,354
Shanghai Lansheng Daewoo Corp.(*6)	49.00	7,957	49.00	-	-
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	49.00	876	49.00	876	818
General Medicines Co., Ltd.	33.00	2,990	33.00	2,990	2,791
Korea LNG Ltd.	20.00	2,749	20.00	2,749	2,566
KG Power (M) Sdn. Bhd.	20.00	-	20.00	-	-
Sebang Steel(*1)	-	-	49.00	484	451
Kwanika UJV (formely, DAEWOO Minerals Canada Corporation)	-	-	35.00	7,173	6,695
Global Komsco Daewoo LLC	35.00	4,445	35.00	4,445	4,149
South-East Asia Gas Pipeline Co., Ltd.	25.04	150,778	25.04	150,778	140,730
HyunSon Engineering & Construction(*2)	4.90	97	4.90	97	90
Daewoo Global Development Pte. Ltd.(*4)	30.00	15,683	-	-	-
VNS-Daewoo Co., Ltd.(*6)	40.00	-	40.00	1,319	1,231
SPH Co., Ltd.	50.00	500	50.00	500	466
Korea Siberia Wood Cjsc	50.00	-	50.00	-	-
Yulchon Mexico S. A. De C. V.(*2)	10.00	1,349	10.00	1,349	1,258
DMSA/AMSA(*2)(*6)	4.00	64,249	4.00	55,268	51,587
PT. Batutua Tembaga Raya(*6)	24.10	21,824	22.00	20,381	19,022
		328,359		299,043	279,114
		₩ 665,227		₩ 746,128	\$ 696,405

(\*1) The entities were newly classified as a subsidiary or an associate due to the spin-off and merger of the iron and steel business sector of POSCO P&S.

(\*2) The Company's ownership interest in the entity is less than 20% but the Company has significant influence over the entity by participating in its Board of Directors and decision making and thus it was classified as investment in associates.

(\*3) It was newly established during the current year.

(\*4) It was reclassified as a subsidiary due to the additional acquisition of shares during the current year.

(\*5) It was included as a subsidiary due to the additional acquisition of shares during the current year.

(\*6) Impairment loss was recognized as the book value exceeded the recoverable amount during the current year.

**9. Investments in subsidiaries and associates (cont'd)**

	Korean won in millions		
	Carrying amount before impaired	Recoverable amount	Impairment loss
POSCO DAEWOO E&P Canada Corp.	₩ 5,022	₩ -	₩ 5,022
POSCO DAEWOO Power(PNGPOM) Ltd.	11,889	10,053	1,836
VNS-DAEWOO Co.,Ltd.	4,228	1,319	2,909
DMSA/AMSA	78,636	55,268	23,368
POSCO DAEWOO Australia Holdings	124,553	124,422	131
DAEWOO Precious Resources Co.,Ltd	6,949	4,841	2,108
Shanghai Lansheng Daewoo Corp.	7,957	-	7,957
KIS Devonian Canada Corporation	61,098	44,427	16,671
PT. Batutua Tembaga Raya	21,824	20,381	1,443
	₩ 322,156	₩ 260,711	₩ 61,445
U. S. dollar in thousands (Note 2)	\$ 300,687	\$ 243,337	\$ 57,350

**10. Property, plant and equipment**

Property, plant and equipment as at December 31, 2016 and 2017 is as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Acquisition cost	₩ 348,854	₩ 855,513	\$ 798,500
Accumulated depreciation	(57,823)	(213,394)	(199,173)
Accumulated impairment losses	-	(3,971)	(3,706)
Government subsidy	(200)	(1,113)	(1,039)
Book value	₩ 290,831	₩ 637,035	\$ 594,582

Changes in the acquisition cost of property, plant and equipment for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016					
	Beginning balance	Business combination	Acquisition	Disposals	Others	Ending balance
Land	₩ 15,370	₩ -	₩ -	₩ -	₩ -	₩ 15,370
Buildings	38,561	-	-	-	-	38,561
Machinery	255,362	-	8	-	8,295	263,665
Others	30,723	-	1,044	(1,346)	440	30,861
Construction-in-progress	8,572	-	1,434	-	(9,609)	397
	₩ 348,588	₩ -	₩ 2,486	₩ (1,346)	₩ (874)	₩ 348,854

  

	2017					
	Beginning balance	Business combination	Acquisition	Disposals	Others	Ending balance
Land	₩ 15,370	₩ 120,198	₩ 811	₩ -	₩ 1,335	₩ 137,714
Buildings	38,561	98,216	375	-	3,043	140,195
Structures	-	25,509	332	(90)	509	26,260
Machinery	263,665	210,267	2,084	(6,696)	5,896	475,216
Others	30,861	37,317	3,956	(3,368)	1,295	70,061
Construction-in-progress	397	3,387	11,464	-	(9,181)	6,067
	₩ 348,854	₩ 494,894	₩ 19,022	₩ (10,154)	₩ 2,897	₩ 855,513
U. S. dollar in thousands (Note 2)	\$ 325,606	\$ 461,913	\$ 17,754	\$ (9,477)	\$ 2,704	\$ 798,500

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

Changes in accumulated depreciation of property, plant and equipment for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

2016						
	Beginning balance	Business combination	Depreciation	Disposals	Others	Ending balance
Buildings	₩ 3,460	₩ -	₩ 951	₩ -	₩ -	₩ 4,411
Machinery	22,311	-	10,901	-	-	33,212
Others	16,378	-	5,062	(1,240)	-	20,200
	<u>₩ 42,149</u>	<u>₩ -</u>	<u>₩ 16,914</u>	<u>₩ (1,240)</u>	<u>₩ -</u>	<u>₩ 57,823</u>

  

2017						
	Beginning balance	Business combination	Depreciation	Disposals	Others	Ending balance
Buildings	₩ 4,411	₩ 16,412	₩ 2,918	₩ -	₩ 206	₩ 23,947
Structures	-	5,666	867	(22)	-	6,511
Machinery	33,212	77,478	22,474	(2,083)	-	131,081
Others	20,200	24,957	9,693	(2,995)	-	51,855
	<u>₩ 57,823</u>	<u>₩ 124,513</u>	<u>₩ 35,952</u>	<u>₩ (5,100)</u>	<u>₩ 206</u>	<u>₩ 213,394</u>
U. S. dollar in thousands (Note 2)	<u>\$ 53,970</u>	<u>\$ 116,215</u>	<u>\$ 33,556</u>	<u>\$ (4,760)</u>	<u>\$ 192</u>	<u>\$ 199,173</u>

Changes in accumulated impairment losses of property, plant and equipment for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

2016					
	Beginning balance	Business combination	Impairment losses	Disposals	Ending balance
Buildings	₩ -	₩ -	₩ -	₩ -	₩ -
Machinery	-	-	-	-	-
Others	-	-	-	-	-
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>

  

2017					
	Beginning balance	Business combination	Impairment losses	Disposals	Ending balance
Buildings	₩ -	₩ 559	₩ -	₩ -	₩ 559
Machinery	-	7,947	-	(4,535)	3,412
Others	-	7	-	(7)	-
	<u>₩ -</u>	<u>₩ 8,513</u>	<u>₩ -</u>	<u>₩ (4,542)</u>	<u>₩ 3,971</u>
U. S. dollar in thousands (Note 2)	<u>\$ -</u>	<u>\$ 7,946</u>	<u>\$ -</u>	<u>\$ (4,240)</u>	<u>\$ 3,706</u>



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

Changes in the government grants for property, plant and equipment for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

2016					
	Beginning balance	Business combination	Received	Depreciation	Ending balance
Machinery	₩ -	₩ -	₩ -	₩ -	₩ -
Others	292	-	-	(92)	200
	₩ 292	₩ -	₩ -	₩ (92)	₩ 200

  

2017					
	Beginning balance	Business combination	Received	Depreciation	Ending balance
Machinery	₩ -	₩ 37	₩ -	₩ (11)	₩ 26
Others	200	1,923	-	(1,036)	1,087
	₩ 200	₩ 1,960	₩ -	₩ (1,047)	₩ 1,113
U. S. dollar in thousands (Note 2)	\$ 187	\$ 1,829	\$ -	\$ (977)	\$ 1,039

Details of assets pledged as collateral for the Company's payables as at December 31, 2017 are as follows (Korean won in millions):

Collateral provided by	Assets pledged as collateral	Accounts	Borrowed amount	Collateral	Maximum amount of bond (Korean won in millions)		U. S. dollar in thousands (Note 2)
					2017	2016	2017
Korea Development Bank	Land	Borrowings	₩ 61,450	Secured interest	₩ 79,000	₩ -	\$ 73,735
	Buildings			Beneficiary certificates of collateral trust	50,000	-	46,668
	Machinery						

The Company's machinery is partially provided as collateral (transferrable) in relation to the borrowings to Korea Development Bank as at December 31, 2017.

## 11. Intangible assets

Intangible assets as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Acquisition cost	₩ 2,050,219	₩ 2,193,677	\$ 2,047,486
Accumulated amortization and impairment loss	(483,498)	(712,695)	(665,200)
Government grants	(12,958)	(12,255)	(11,438)
Book value	₩ 1,553,763	₩ 1,468,727	\$ 1,370,848

Changes in acquisition cost of intangible assets for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016					
	Beginning balance	Business combination	Acquisition	Disposals	Others	Ending balance
Goodwill	₩ 1,033	₩ -	₩ -	₩ -	₩ -	₩ 1,033
Exploration and evaluation assets	4,375	-	294	-	-	4,669
Development assets	1,753,944	-	15,473	-	36,011	1,805,428
Industrial proprietary rights	6,711	-	-	-	-	6,711
Mining rights	191,205	-	44,473	-	(31,143)	204,535
Development costs	-	-	9,304	-	(9,304)	-
Membership	12,214	-	-	(117)	-	12,097
Software	14,875	-	41	-	830	15,746
	₩ 1,984,357	₩ -	₩ 69,585	₩ (117)	₩ (3,606)	₩ 2,050,219

  

	2017					
	Beginning balance	Business combination	Acquisition	Disposals	Others	Ending balance
Goodwill	₩ 1,033	₩ -	₩ -	₩ -	₩ -	₩ 1,033
Exploration and evaluation assets	204,535	-	99,883	-	2,513	306,931
Industrial proprietary rights	4,669	4	256	-	-	4,929
Mining rights	1,805,428	-	3,206	-	19,455	1,828,089
Development costs	6,711	-	-	-	-	6,711
Membership	12,097	4,152	372	(569)	782	16,834
Software	15,746	11,411	536	-	1,457	29,150
	₩ 2,050,219	₩ 15,567	₩ 104,253	₩ (569)	₩ 24,207	₩ 2,193,677
U. S. dollar in thousands (Note 2)	\$ 1,913,589	\$ 14,530	\$ 97,305	\$ (531)	\$ 22,593	\$ 2,047,486

## 11. Intangible assets (cont'd)

Changes in accumulated amortization and impairment losses of intangible assets for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016				
	Beginning balance	Business combination	Amortization	Impairment losses	Ending balance
Goodwill	₩ 1,033	₩ -	₩ -	₩ -	₩ 1,033
Exploration and evaluation assets	28,900	-	-	2,190	31,090
Industrial proprietary rights	4,135	-	178	-	4,313
Mining rights	286,687	-	125,866	10,626	423,179
Development costs	6,711	-	-	-	6,711
Membership	2,614	-	-	1,000	3,614
Software	11,967	-	1,591	-	13,558
	₩ 342,047	₩ -	₩ 127,635	₩ 13,816	₩ 483,498

  

	2017				
	Beginning balance	Business combination	Amortization	Impairment losses	Ending balance
Goodwill	₩ 1,033	₩ -	₩ -	₩ -	₩ 1,033
Exploration and evaluation assets	31,090	-	-	56,519	87,609
Industrial proprietary rights	4,313	3	167	-	4,483
Mining rights	423,179	-	142,877	18,172	584,228
Development costs	6,711	-	-	-	6,711
Membership	3,614	-	341	270	4,225
Software	13,558	8,014	2,834	-	24,406
	₩ 483,498	₩ 8,017	₩ 146,219	₩ 74,961	₩ 712,695
U. S. dollar in thousands (Note 2)	\$ 451,277	\$ 7,483	\$ 136,475	\$ 69,965	\$ 665,200

Changes in government grants for intangible assets for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016			
	Beginning balance	Amortization	Others	Ending balance
Exploration and evaluation assets	₩ 12,255	₩ -	₩ -	₩ 12,255
Mining rights	806	(103)	-	703
	₩ 13,061	₩ (103)	₩ -	₩ 12,958

  

	2017			
	Beginning balance	Amortization	Others	Ending balance
Exploration and evaluation assets	₩ 12,255	₩ -	₩ -	₩ 12,255
Mining rights	703	-	(703)	-
	₩ 12,958	₩ -	₩ (703)	₩ 12,255
U. S. dollar in thousands (Note 2)	\$ 12,094	\$ -	\$ (656)	\$ 11,438

### 11.1 Joint operation

Mining rights and machinery include the Company's proportionate share of the jointly controlled assets. As at December 31, 2017, the list of significant joint operations is as follows:

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

## 12. Investment properties

Investment properties as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Acquisition cost	₩ 168,031	₩ 167,632	\$ 156,461
Accumulated depreciation	(7,027)	(10,001)	(9,335)
Book value	₩ 161,004	₩ 157,631	\$ 147,126

Changes in acquisition cost of investment properties for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

		2016				
		Beginning balance	Business combination	Acquisition	Others	Ending balance
Land	₩	51,703	₩ -	₩ -	₩ -	₩ 51,703
Buildings		116,328	-	-	-	116,328
	₩	168,031	₩ -	₩ -	₩ -	₩ 168,031
		2017				
		Beginning balance	Business combination	Acquisition	Others	Ending balance
Land	₩	51,703	₩ 881	₩ -	₩ (1,335)	₩ 51,249
Buildings		116,328	3,030	5	(3,001)	116,362
Structures		-	21	-	-	21
	₩	168,031	₩ 3,932	₩ 5	₩ (4,336)	₩ 167,632
U. S. dollar in thousands (Note 2)	\$	156,833	\$ 3,670	\$ 5	\$ (4,047)	\$ 156,461

Changes in accumulated depreciation of investments properties for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

		2016				
		Beginning balance	Business combination	Depreciation	Others	Ending balance
Buildings	₩	4,119	₩ -	₩ 2,908	₩ -	₩ 7,027
		2017				
		Beginning balance	Business combination	Depreciation	Others	Ending balance
Buildings	₩	7,027	₩ 258	₩ 2,919	₩ (207)	₩ 9,997
Structures		-	3	1	-	4
	₩	7,027	₩ 261	₩ 2,920	₩ (207)	₩ 10,001
U. S. dollar in thousands (Note 2)	\$	6,559	\$ 244	\$ 2,725	\$ (193)	\$ 9,335

The fair value of investment properties amounted to ₩172,420 million (\$160,930 thousand) and ₩170,285 million (\$158,937 thousand) as at December 31, 2017 and 2016, respectively.

## 12. Investment properties (cont'd)

Income and expense arising from investment properties for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Rental income	₩ 4,587	₩ 6,042	\$ 5,639
Rental expense	(3,321)	(2,819)	(2,631)
	₩ 1,266	₩ 3,223	\$ 3,008

### 12.1 Joint arrangement

The Company owns POSCO Tower Songdo, located in Yeonsu-gu, Incheon, in form of a joint arrangement. As at the end of reporting period, the Company owns 60% of the real estate, which is classified as property, plant and equipment and investment properties. The Company 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 Company's shares.

## 13. Trade and other payables

Trade and other payables as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Current:			
Trade payables	₩ 1,517,470	₩ 1,536,656	\$ 1,434,251
Other payables	127,231	196,950	183,825
Accrued expenses	13,099	19,179	17,900
Guarantee deposits received	60	619	578
	1,657,860	1,753,404	1,636,554
Non-current:			
Long-term other payables	2,422	804	750
Long-term accrued expenses	-	787	735
Long-term guarantee deposits received	2,053	2,909	2,715
Financial guarantee liabilities	23,955	19,362	18,072
	28,430	23,862	22,272
	₩ 1,686,290	₩ 1,777,266	\$ 1,658,826

**POSCO DAEWOO Corporation**  
**Notes to the separate financial statements**  
**December 31, 2016 and 2017**

**14. Borrowings**

Borrowings as at December 31, 2016 and 2017 are as follows:

	Creditor	Annual interest rates as at Dec. 31, 2017	The longest maturity	Korean won in millions		U. S. dollar in thousands (Note 2)
				2016	2017	2017
Current borrowings:						
Short-term borrowings:						
Banker's usance and others	Woori Bank and others	6M Libor + 0.3~1.3% and others	-	₩ 1,401,759	₩ 1,520,180	\$ 1,418,873
				1,401,759	1,520,180	1,418,873
Current-portion of long-term borrowings:						
Work-out debt from creditor council	AKA Bank	-	-	6,456	-	-
Energy special account financing loan	Korea Energy Agency	3 year government bond yield -2.25% and others	2018.12.31	5,930	5,601	5,228
Forgivable borrowings	Korea Energy Agency	3 year government bond yield -2.25% and others	2018.12.31	25,760	30,968	28,904
Others	Kookmin Bank and others	3M Libor +2.2% and others	2018.12.31	32,267	190,338	177,653
Less: present value discount				(1,380)	(1,109)	(1,035)
				69,033	225,798	210,750
				1,470,792	1,745,978	1,629,623
Non-current borrowings:						
Korean won denominated borrowings:						
Energy special account financing loan	Korea Energy Agency	3 year government bond yield -2.25% and others	2027.12.15	10,779	7,862	7,338
Forgivable borrowings	Korea Energy Agency	-	-	2,358	-	-
Other borrowings	Korea Rural Community Corporation	2.00% and others	2032.12.28	27,500	145,750	136,037
				40,637	153,612	143,375
Foreign-currency denominated borrowings:						
Energy special account financing loan	Korea Energy Agency	3 year government bond yield -2.25% and others	2027.12.15	31,352	23,121	21,580
Forgivable borrowings	Korea Energy Agency	3 year government bond yield -2.25% and others	Undecided	182,449	122,245	114,098
Other foreign currency borrowings	The Export- Import Bank of Korea	3M Libor+1.60%	2020.12.21	205,445	74,998	70,000
				419,246	220,364	205,678
				459,883	373,976	349,053
Less: present value discount				(3,074)	(1,423)	(1,328)
				456,809	372,553	347,725
				₩ 1,927,601	₩ 2,118,531	\$ 1,977,348

#### 14. Borrowings (cont'd)

Details of bonds as at December 31, 2016 and 2017 are as follows:

	Annual interest rates as at Dec. 31, 2017	Maturity	Korean won in millions		U. S. dollar in thousands (Note 2)
			2016	2017	2017
Current-portion of bonds:					
8-2nd unsecured bond	3.09%	2018.03.08	₩ -	₩ 150,000	\$ 140,004
10-1st unsecured bond	-	-	180,000	-	-
11th privately placed bond	3M Libor + 0.9%	2018.10.16	-	214,280	200,000
12th privately placed bond	-	-	115,175	-	-
14th unsecured bond	3.50%	2018.06.12	-	100,000	93,336
			295,175	464,280	433,340
Less: present value discount on bonds			(442)	(544)	(508)
			294,733	463,736	432,832
Non-current bonds:					
8-2nd unsecured bond	-	-	150,000	-	-
10-2nd unsecured bond	3.26%	2019.07.02	220,000	220,000	205,339
11th privately placed bond	-	-	241,700	-	-
13th public offered bond	2.02%	2019.07.14	150,000	150,000	140,004
14th unsecured bond	-	-	-	-	-
15th unsecured bond	2.53%	2019.07.08	-	30,000	28,001
16-1st unsecured bond	2.26%	2020.07.17	-	130,000	121,337
16-2nd unsecured bond	2.69%	2022.07.17	-	70,000	65,335
17th unsecured bond	3M SGD SOR + 85bp	2019.10.25	-	136,107	127,036
			761,700	736,107	687,052
Less: present value discount on bonds			(2,223)	(1,907)	(1,780)
			759,477	734,200	685,272
			₩ 1,054,210	₩ 1,197,936	\$ 1,118,104

#### 15. Other liabilities

Other liabilities as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Current:			
Advance received	₩ 87,752	₩ 88,335	\$ 82,448
Withholdings	26,193	38,311	35,758
	113,945	126,646	118,206
Non-current:			
Long-term withholdings	1,588	37,693	35,181
	₩ 115,533	₩ 164,339	\$ 153,387

## 16. Severance and retirement benefit liability

The Company 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

	2016	2017
Discount rate (%)	2.54%	2.87~3.40%
Future salary growth rate (%)	5.00%	3.00~5.23%
Expected retirement rate (%)	8.50%	3.09~9.14%

### 16.2 Sensitivity analysis

#### 16.2.1 Discount rate

	1%point decrease	1%point increase
Impact on the defined benefit obligation	₩ 13,009	₩ (11,117)
Rate of change	9.90%	(8.46%)

#### 16.2.2 Future salary growth rate

	1%point decrease	1%point increase
Impact on the defined benefit obligation	₩ (11,101)	₩ 12,723
Rate of change	(8.45%)	9.68%

### 16.3 Net benefit expense recognized in profit or loss

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Current service cost	₩ 13,950	₩ 16,707	\$ 15,594
Net Interest cost	551	379	354
	₩ 14,501	₩ 17,086	\$ 15,948

### 16.4 Amounts recognized in the statement of financial position

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Present value of defined benefit obligation	₩ 86,361	₩ 131,392	\$ 122,636
Fair value of plan assets	(82,792)	(139,179)	(129,904)
Severance benefit liabilities	₩ 3,569	₩ 437	\$ 408
Severance benefit assets	₩ -	₩ (8,224)	\$ (7,676)



#### 16.5 Changes in the present value of the defined benefit obligation

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Beginning balance	₩ 82,575	₩ 86,361	\$ 80,606
Current service cost	13,950	16,707	15,594
Interest cost	2,020	2,960	2,763
Benefits paid	(14,319)	(6,065)	(5,661)
Re-measurement gain (loss) in OCI:	2,118	(1,943)	(1,814)
Actuarial changes arising from changes in demographic assumptions	-	330	308
Actuarial changes arising from changes in financial assumptions	(295)	(1,984)	(1,852)
Others	2,413	(289)	(270)
Increase due to business combination	-	33,372	31,148
Others	17	-	-
Ending balance	₩ 86,361	₩ 131,392	\$ 122,636

#### 16.6 Changes in the fair value of plan assets

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Beginning balance	₩ 68,169	₩ 82,792	\$ 77,275
Contribution by employer	24,995	26,800	25,014
Interest income	1,469	2,581	2,409
Benefits paid	(12,062)	(5,653)	(5,276)
Re-measurement gain (loss) in OCI:	204	(1,070)	(999)
Actuarial changes arising from changes in financial assumptions	204	(1,070)	(999)
Increase due to business combination	-	33,729	31,481
Others	17	-	-
Ending balance	₩ 82,792	₩ 139,179	\$ 129,904

#### 16.7 Re-measurement gain (loss) in OCI

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Re-measurement of defined benefit obligation	₩ (2,118)	₩ 1,943	\$ 1,814
Re-measurement of plan assets	204	(1,070)	(999)
	(1,914)	873	815
Income tax effect	463	(211)	(197)
Other comprehensive income	₩ (1,451)	₩ 662	\$ 618

## 16.8 Analysis of defined benefit plans on future cash flows

The estimated contribution for the fiscal year ending December 31, 2017 amounted to ₩6,569 million. The maturity analysis of the Company's un-discounted pension benefit payments at the end of the reporting period is as follows:

	Korean won in millions				
	Less than 1 year	1 year to 2 years	2 years to 5 years	Over 5 years	Total
Amount to be paid	₩ 6,060	₩ 7,752	₩ 30,593	₩ 218,761	₩ 263,166

The weighted average maturity of defined benefit obligations is 8.54~12.33 years.

## 17. Provisions

Provisions as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Provision for contingencies (see Note 18)	₩ 74,085	₩ 29,212	\$ 27,265
Provision for restoration	10,953	30,074	28,070
	₩ 85,038	₩ 59,286	\$ 55,335

Changes in provisions for the year ended December 31, 2017 are as follows:

	Korean won in millions			U. S. dollar in thousands (Note 2)
	Provision for contingencies	Provision for restoration	Total	Total
Beginning balance	₩ 74,085	₩ 10,953	₩ 85,038	\$ 79,371
Business combination	178	-	178	166
Contribution	9,335	20,563	29,898	27,906
Transfer	(51,547)	-	(51,547)	(48,112)
Foreign currency translation	(2,839)	(1,442)	(4,281)	(3,996)
Ending balance	₩ 29,212	₩ 30,074	₩ 59,286	\$ 55,335

## 18. Provision for contingencies

Changes in provision for contingencies for the year ended December 31, 2017 are as follows (Korean won in millions):

	Beginning Balance	Business combination	Increase	Transfer	Foreign currency translation	Ending Balance	Principal debt amount
Creditors of Daewoo Corp.	₩ 28,268	₩ -	₩ 810	₩ -	₩ (2,789)	₩ 26,289	₩ 239,384
Legal proceedings provision	476	51	2,319	-	(50)	2,796	-
Provisions for construction warranties	-	127	-	-	-	127	-
Other onerous contracts provision(*1)	45,341	-	6,206	(51,547)	-	-	-
	₩ 74,085	₩ 178	₩ 9,335	₩ (51,547)	₩ (2,839)	₩ 29,212	₩ 239,384
U.S. dollar in thousands (Note 2)	\$ 69,148	\$ 166	\$ 8,713	\$ (48,112)	\$ (2,650)	\$ 27,265	\$ 223,431

(\*1) 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 the execution of investments. As at December 31, 2017, Devonian PEF exercised the put option of ₩112,644 million. The Company acquired 100% shares in KIS Devonian Canada, the SPC located in Canada, in which Devonian PEF had 100% ownership interest.

### 18.1 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. Creditors approving the spin-off entered into a work-out agreement on March 15, 2000, transferring a portion of Daewoo Corporation's liabilities 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 Company estimated ₩26,289 million (\$24,537 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 Company estimated the probable loss of the pending petitions and reflected the amount in provisions for contingencies as at December 31, 2017.

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 May 25, 2017, the bankruptcy was over.

## 18.2 Pending litigations

As at the reporting date, the Company is a defendant in pending lawsuits involving 20 claims (domestic: 11 claims, overseas: 9 claims). The total amount of the lawsuits, except one case that the outcome of the pending litigation cannot be reasonably estimated, is ₩ 9,903 million, USD 22,228 thousand, EUR 2,747 thousand, INR 4,518,694 thousand, CAD 79,000 thousand and PKR 124,775 thousand.

The Company is involved in 26 pending lawsuits as a plaintiff as at December 31, 2017.

The ultimate outcome of these lawsuits could not be determined. Therefore, the Company has not recognized potential liabilities that may arise as a result of the above litigations as at December 31, 2017 other than lawsuits for which provision for contingencies is recognized.

## 18.3 Credit facilities

As at December 31, 2017, the Company 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	USD	309,635	USD	251,887
L/C	Woori Bank and others	USD	1,493,000	USD	1,256,124
D/A	Woori Bank and others	USD	1,878,754	USD	653,918
Credit line in foreign currency	Woori Bank and others	USD	531,000	USD	413,067
P-Bond and others	Woori Bank and others	USD	590,596	USD	308,914
Overdraft and others	Woori Bank and others	KRW	7,000		-

## 18.4 Collateral

The Company has pledged 33 blank promissory notes and 21 blank checks as collateral to Korea Energy Agency for the contract performance guarantees as at December 31, 2017.

## 18.5 Derivatives

The Company 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	USD	15,000	Limit of loss
	Kookmin Bank	KRW	33,600	Limit of loss
	Suhyup Bank	KRW	10,000	Limit of loss
	Citibank Korea	USD	50,000	Limit of risk transaction
	SC Bank Korea	USD	120,000	Limit of transaction
	UOB(*1)	USD	200,000	Limit of transaction
	Deutsch Bank	USD	13,000	Limit of risk transaction
	Credit Agricole	USD	50,000	Limit of risk transaction
	KEB Hana Bank(*1)	USD	30,000	Limit of loss
	ANZ Bank	USD	10,000	Limit of risk transaction
	Societe Generale	USD	42,000	Limit of risk transaction
	SMBC	USD	200,000	Limit of transaction
	Industrial & Commercial Bank of China	USD	50,000	Limit of risk transaction
	Korea Development Bank	KRW	30,000	Limit of risk transaction
	ING Bank	USD	34,000	Limit of risk transaction
	Mizuho Bank	USD	20,000	Limit of loss

## 18.5 Derivatives (cont'd)

Contract	Bank	Derivative credit lines		Details
Commodity futures	Triland	USD	5,000	Limit of loss
		USD	5,000	Limit of transaction
	Mitsui Bussan	USD	15,000	Limit of loss
		USD	15,000	Limit of transaction
	Toyota	USD	13,000	Limit of loss
		USD	13,000	Limit of transaction
	Societe Generale	USD	20,000	Limit of loss
		USD	20,000	Limit of transaction
	BOCI	USD	15,000	Limit of loss
		USD	15,000	Limit of transaction
	CMS	USD	5,000	Limit of transaction
		USD	3,000	Limit of loss
	Daishin Securities(*2)	USD	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 (Korean won in millions):

### 18.5.1 Currency forwards

Currency unit	Unsettled contractual amount		Accumulated valuation gain (loss)
	Long position	Short position	
USD	₩ 47,356	₩ 552,226	₩ 9,006
EUR	3,264	619,043	(3,921)
JPY	7,131	15,754	(2)
CNY	1,908	16,039	(76)
AED	116	-	-
THB	14	14	-
SGD	-	7,846	(47)
CAD	4,048	44,576	(2,053)
GBP	504	5,107	9
AUD	47,356	552,226	(73)
			₩ 2,843
			\$ 2,654

U. S. dollar in thousands (Note 2)

### 18.5.2 Commodity futures

Commodity	Unsettled contractual amount		Accumulated valuation gain (loss)
	Long position	Short position	
Aluminum	₩ 34,498	₩ 113,586	₩ (3,868)
Copper	79,353	129,894	(1,434)
Nickel	36,291	74,128	(4,690)
Tin	1,250	27,891	(743)
Naphtha	2,547	2,509	(1)
Propane	10,580	13,054	641
Fuel oil	1,148	-	17
			₩ (10,078)
			\$ (9,406)

U. S. dollar in thousands (Note 2)

### 18.5.3 Currency swap

Bank	Unsettled contractual amount				Expiration date	Interest swap	Valuation	
	Payment		Receipt				gain	(loss)
UOB	USD	75,000	SGD	102,000	Oct. 25, 2019	Pay 3M USD Libor+1.15% Receive 3M SGD SOR+0.85%	₩	858
Credit Agricole	USD	50,000	SGD	68,000	Oct. 25, 2019	Pay 3M USD Libor+1.15% Receive 3M SGD SOR+0.85%		584
							₩	1,442
U. S. dollar in thousands (Note 2)							\$	1,346

U. S. dollar in thousands (Note 2)

Changes in the book value of derivative financial assets (liabilities) for the year ended December 31, 2017 are as follows:

	Korean won in millions					
	Beginning balance	Business combination	Settlement	Valuation gain	Valuation loss	Ending balance
Currency forwards	₩ 10,082	₩ (1,554)	₩ (8,528)	₩ 9,315	₩ (6,472)	₩ 2,843
Commodity futures	10,508	-	(10,508)	14,669	(24,747)	(10,078)
Currency futures	4	-	(4)	-	-	-
Currency swap	(41,933)	-	41,933	1,442	-	1,442
Firm commitment contracts	(6,313)	-	(1,873)	64,755	(43,164)	13,405
Others	(3,105)	-	3,507	716	(1,118)	-
	<u>₩ (30,757)</u>	<u>₩ (1,554)</u>	<u>₩ 24,527</u>	<u>₩ 90,897</u>	<u>₩ (75,501)</u>	<u>₩ 7,612</u>
U. S. dollar in thousands (Note 2)	<u>\$ (28,707)</u>	<u>\$ (1,450)</u>	<u>\$ 22,892</u>	<u>\$ 84,839</u>	<u>\$ (70,469)</u>	<u>\$ 7,105</u>

The Company uses commodity futures and other financial instruments to hedge its commodity price risks and other risks attributable to firm sales or purchase contracts. The Company 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, 2017, settled firm commitment contracts amounting to ₩9,538 million (\$89,024 thousand) and ₩11,411 million (\$10,651 thousand) were deducted from sales and cost of sales, respectively.

## 18.6 Guarantee obligations

Guarantees provided by the Company to certain creditors on behalf of associates/debtors as at December 31, 2017 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)	
PT. Bio Inti Agrindo	POSCO-Asia	USD 10,000	₩ 10,714	USD 10,000	₩ 10,714	2018
	Industrial & Commercial Bank of China	USD 36,500	39,106	USD 36,500	39,106	2018
	Korea Exim bank	USD 4,500	4,821	USD 4,500	4,821	2019
	Korea Exim bank	USD 6,875	7,366	USD 6,875	7,366	2020
	Korea Exim bank	USD 26,000	27,856	USD 26,000	27,856	2021
	Korea Exim bank	USD 5,000	5,357	USD 5,000	5,357	2022
	Korea Exim bank	USD 22,000	23,571	USD 22,000	23,571	2023
	Korea Exim bank	USD 10,000	10,714	USD 10,000	10,714	2020
POSCO DAEWOO India Pvt Ltd.	Shinhan Bank	USD 14,600	32,142	USD 17,379	18,619	2018
	Shinhan Bank	USD 20,000	15,642	USD 5,072	5,434	2018
	Shinhan Bank	USD 14,000	21,428	USD 3,121	3,344	2018
	Shinhan Bank	USD 7,800	15,000	USD 11,002	11,787	2018
	Industrial Bank of Korea	USD 10,000	8,357	USD -	-	2018
	Woori Bank	USD 20,000	10,714	USD 3,589	3,846	2018
	SMBC	USD 26,000	21,428	USD -	-	2018
	Mizuho Bank	USD 20,000	27,856	USD 11,075	11,866	2018
	Deutsch Bank	INR 2,700,000	21,428	INR -	-	2018
	Credit Agricole	INR 1,330,000	45,144	INR 393,685	6,582	2018
	Standard chartered, New Delhi	INR 1,670,000	22,238	INR -	-	2018
	Standard chartered, New Delhi	INR 1,650,000	27,922	INR 929,293	15,538	2018
	Standard chartered, New Delhi	USD 8,225	27,588	USD 714,300	11,943	2018
	Industrial & Commercial Bank of China	USD 21,818	8,812	USD 8,225	8,812	2019
Global Komsco Daewoo L.L.C.						
Sherritt International Corporation	Korea Exim bank	USD 65,455	23,376	USD 5,178	5,548	2023
Ambatovy project investments Ltd.	Korea Exim bank	USD 54,400	70,128	USD 23,147	24,800	2019
Daewoo Power Png Ltd.	Korea Exim bank	USD 21,633	58,284	USD 54,400	58,284	2025
Daewoo Global Development Pte. Ltd.	Korea Exim bank	USD 4,000	23,178	USD 21,633	23,178	2018
POSCO Assan TST Steel Industry A.S.	ING and others	USD 10,000	15,699	USD 14,653	15,699	2020
Daewoo Textile LLC	Korea Exim bank	USD 6,875	4,286	USD 4,000	4,286	2018
		USD 473,459		USD 303,349		
		INR 7,350,000	₩ 630,155	INR 2,037,278	₩ 359,071	

Principal debtors listed above are related parties of the Company, excluding Sherritt International Corp. and Ambatovy Project Investments Ltd.

Investments in DMSA and AMSA (book value: ₩55,268 million) have been pledged as collateral to creditors in connection with the above payment guarantees.

## **18.7 Other commitments**

### **18.7.1 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 of DGDP or any successor of the financial investor (collectively, "FI") has a put option to sell its equity interest in DGDP and its subordinated loan to DGDP to other shareholders until 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 are to purchase the equity interest and the subordinated loan in proportion to its equity ownership. Other shareholders except the Company may decline to purchase the equity interest and the subordinated loan. FI has exercised put option for the stocks during the current year. The exercise price of the put option is ₩27,037 million (\$25,235 thousand) out of which ₩20,278 million (\$18,927 thousand) is acquired by the Company. There is no subordinated bond. The Company has acquired the stocks in October 2017.

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 funds 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, 2017, the outstanding borrowings amounts to ₩182,138 million (\$170,000 thousand) and the borrowing limit is ₩182,138 million (\$170,000 thousand).

In accordance with the cash deficiency support agreement entered into between DGDP's shareholders (except FI), if the principal of DGDP's borrowings from POSCO Asia Co., Ltd. cannot be repaid, the shareholders should supplement the fund with subordinated loans based on the shareholding ratio on the repayment day. As at December 31, 2017, the balance of the borrowings is ₩10,703 million (\$9,990 thousand) and the borrowing limit is ₩29,137 million (\$27,195 thousand).

### **18.7.2 SPH Co., Ltd.**

In 2014, the Company and POSCO Engineering & Construction Co., Ltd. ("POSCO E&C") 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 E&C 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, 2017, the outstanding borrowings amount to ₩99,000 million (\$92,402 thousand) and the borrowing limit is ₩140,000 million (\$ 130,670 thousand).

### **18.7.3 Commitments to supplement funds for Korea Ambatovy Consortium (KAC)**

The Company invested in the Ambatovy Nickel Project (DMSA/ASMA) in Madagascar through Korea Ambatovy Consortium (KAC), which is composed of Korea Resource Corporation (KORES) and STX Co., Ltd. As the 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, 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.

Sherritt International Corp., the operator, has partially transferred the shares in the project Sumitomo and Ambatovy Holdings Limited in November 2017. KAC retains rights and obligation including call options for ownership interest in the newly incorporated entity. The Company's legal relationship with KAC may change depending on the results of arbitration.



#### 18.7.4 Environmental restoration expenses of Peru's mining lot 8.

The Company, entities related to the mining lot and operator have entered into a contract with regards to the ratio of paying for environmental restoration expenses. However, as the expenses are expected to increase, the operator has rejected to pay for the expenses. Currently, the due diligence is ongoing for the calculation of environmental restoration expenses. The Company and the entities related to the mining lot claimed arbitration against the operator for the violation of the contract.

#### 19. Issued capital, capital surplus and other components of equity

Issued capital as at December 31, 2017 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	123,375,149	₩ 5,000	₩ 616,876	₩ 518,848
U. S. dollar in thousands (Note 2)				\$ 575,766	\$ 484,271

The number of total shares has increased due to new issuance (number of shares issued: 9,498,858) as a result of the merger of a business sector spun off from POSCO P&S.

Capital surplus as at December 31, 2016 and 2017 are as follows (Korean won in millions, except for par value amount):

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Paid-in capital in excess of par value(*1)	₩ 333,145	₩ 518,848	\$ 484,271
Other capital surplus(*2)	16	25,155	23,479
	₩ 333,161	₩ 544,003	\$ 507,750

(\*1) Paid-in capital in excess of par value has increased due to new issuance (issue price: ₩24,550) as a result of the merger of a business sector spun off from POSCO P&S.

(\*2) ₩25,139 million (\$23,464 thousand), the difference in consideration transferred of ₩233,197 million (\$217,656 thousand) from the merger and the carrying amount of net assets acquired of ₩258,336 million (\$241,120 thousand), was accounted for as other capital surplus.

Other components of equity as at December 31, 2016 and 2017 are as follows (Korean won in millions):

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Treasury stock (*1)	₩ -	₩ (6)	\$ (6)

(\*1) The Company has acquired 258 odd lots in shares from the merger of iron and steel business sector spun off from POSCO P&S for the year ended December 31, 2017.

## 20. Accumulated other comprehensive income

Accumulated other comprehensive income comprises gain on valuation of available-for-sale financial assets. Changes in gain on valuation of available-for-sale financial assets for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Beginning balance	₩ 22,422	₩ 21,129	\$ 19,721
Changes during the year	(1,705)	(10,219)	(9,538)
Tax effect	412	2,473	2,308
Ending balance	₩ 21,129	₩ 13,383	\$ 12,491

## 21. Retained earnings

Retained earnings as at December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Legal reserve(*1)	₩ 33,478	₩ 39,172	\$ 36,562
Voluntary reserve(*2)	1,349,000	1,409,000	1,315,101
Unappropriated	124,787	153,198	142,989
	₩ 1,507,265	₩ 1,601,370	\$ 1,494,652

(\*1) The Commercial Code of the Republic of Korea requires the Company to appropriate, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid, until such reserve equals 50% of its issued capital. The reserve is not available for the payment of cash dividends, but may be transferred to issued capital, or used to reduce accumulated deficit, if any.

(\*2) Voluntary reserve consists of a reserve for business expansion.

### 21.1 Statements of appropriations of retained earnings

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Retained earnings before appropriations:			
Unappropriated retained earnings carried forward from the prior year	₩ 2,529	₩ 2,155	\$ 2,012
Actuarial gain (loss)	(1,451)	662	618
Profit for the year	123,709	150,381	140,359
	124,787	153,198	142,989
Appropriations:			
Legal reserve	5,694	6,169	5,758
Reserve for business expansion	60,000	83,000	77,469
Cash dividends	56,938	61,687	57,576
	122,632	150,856	140,803
Unappropriated retained earnings to be carried forward to the next year	₩ 2,155	₩ 2,342	\$ 2,186

Appropriation approval dates for 2016 and 2017 are March 13, 2017 and March 12, 2018, respectively.

## 21.2 Dividends

Details of dividends declared for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
	Cash dividends	Cash dividends	Cash dividends
Dividends per share (Korean won and U.S. dollar) (dividend ratio) (A)	₩ 500 (10%)	₩ 500 (10%)	\$ 0.467 (10%)
Number of shares (B)	113,876,291	123,374,891	123,374,891
Dividends (A x B)	₩ 56,938	₩ 61,687	\$ 57,576

## 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, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Cost of goods sold	₩ 14,252,586	₩ 19,582,121	\$ 18,277,134
Employee salaries	119,360	139,513	130,216
Depreciation of property, plant and equipment	16,822	34,905	32,579
Amortization of intangible asset	127,532	146,219	136,475
Depreciation of investment properties	2,908	2,920	2,725
Others	593,721	633,032	590,846
	₩ 15,112,929	₩ 20,538,710	\$ 19,169,975

## 23. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Salaries	₩ 104,859	₩ 124,402	\$ 116,112
Severance benefit	14,501	15,111	14,104
Employee welfare	25,044	25,605	23,899
Travel	7,827	8,012	7,478
Communication	3,883	4,532	4,230
Utilities	130	267	249
Taxes and dues	3,132	3,919	3,658
Rents	9,561	9,792	9,139
Depreciation	6,453	8,324	7,769
Amortization	1,768	3,031	2,829
Repairs	154	381	356
Insurance	24,504	29,134	27,192
Entertainment	400	479	447
Advertising	918	1,049	979

### 23. Selling and administrative expenses (cont'd)

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Packaging	₩ 2,109	₩ 507	\$ 473
Freight	350,566	355,511	331,819
Shipping	37,636	35,113	32,773
Commissions	78,233	87,717	81,871
Bad debt expenses	40,357	75,929	70,869
Supplies	510	552	515
Car maintenance	1,521	2,017	1,883
Printing	296	306	286
Training	1,435	2,038	1,902
Research and development	1,344	2,513	2,346
Sales promotion	3,057	3,452	3,222
Exhibition	119	107	100
Samples	195	181	169
Miscellaneous expense	217	141	132
Conference	107	399	372
	₩ 720,836	₩ 800,521	\$ 747,173

### 24. Finance income and costs

Details of finance income for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Interest income	₩ 35,400	₩ 29,783	\$ 27,798
Financial guarantee income	869	1,888	1,762
Dividends income	70,647	53,180	49,636
Gain on foreign currency transactions	520,418	388,029	362,172
Gain on foreign currency translation	122,493	160,736	150,024
Gain on valuation of derivatives	71,723	90,897	84,839
Gain on settlement of derivatives	252,895	188,645	176,073
	₩ 1,074,445	₩ 913,158	\$ 852,304

Details of finance costs for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Loss on disposal of trade accounts receivable	₩ 16,915	₩ 31,817	\$ 29,697
Interest expenses	43,150	72,543	67,709
Financial guarantee expense	22,777	7,434	6,939
Loss on foreign currency transactions	514,749	369,253	344,645
Loss on foreign currency translation	123,986	167,414	156,257
Loss on valuation of derivatives	59,009	75,501	70,469
Loss on settlement of derivatives	267,605	215,976	201,583
	₩ 1,048,191	₩ 939,938	\$ 877,299

## 24. Finance income and costs (cont'd)

Details of interest income for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Interest income on cash equivalents	₩ 1,545	₩ 1,200	\$ 1,120
Other interest income	33,855	28,583	26,678
	₩ 35,400	₩ 29,783	\$ 27,798

Details of interest expenses for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Interest on borrowings and bonds	₩ 46,754	₩ 75,041	\$ 70,040
Less: capitalization of borrowing costs	(3,604)	(2,498)	(2,331)
	₩ 43,150	₩ 72,543	\$ 67,709

## 25. Other income and expenses

Details of other income for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Gain on disposal of property, plant and equipment	₩ 151	₩ 1,441	\$ 1,344
Gain on disposal of intangible assets	83	-	-
Gain on disposal of disposal groups classified as held for sale	-	465	434
Gain on disposal of available-for-sale financial assets	13	110	103
Reversal of other allowance for doubtful accounts	488	464	433
Miscellaneous income	9,622	43,461	40,565
	₩ 10,357	₩ 45,941	\$ 42,879

**25. Other income and expenses (cont'd)**

Details of other expenses for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Contribution to provisions for restoration	₩ 345	₩ 241	\$ 225
Other bad debt expense	43,352	3,762	3,511
Loss on disposal of property, plant and equipment	1	476	444
Loss on disposal of intangible assets	-	98	91
Loss on impairment of intangible assets	13,816	74,961	69,965
Donations	1,209	863	806
Contribution to provision for contingencies	32,592	9,335	8,713
Loss on impairment of investments in subsidiaries and associates	53,586	61,445	57,350
Loss on disposal of available-for-sale financial assets	530	22	21
Loss on impairment of available-for-sale financial assets	182	-	-
Miscellaneous expenses	41,928	11,075	10,338
	<u>₩ 187,541</u>	<u>₩ 162,278</u>	<u>\$ 151,464</u>

**26. Impairment of financial instrument**

Details of impairment of financial instrument for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Bad debt expenses	₩ 40,357	₩ 75,929	\$ 70,869
Loss on impairment of available-for-sale financial assets	182	-	-
Other bad debt expenses	42,719	2,930	2,734
Less: reversal of allowance for doubtful accounts	(471)	(263)	(245)
	<u>₩ 82,787</u>	<u>₩ 78,596</u>	<u>\$ 73,358</u>

## 27. Income taxes

The major components of income tax expenses for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Current income taxes	₩ 83,370	₩ 70,677	\$ 65,967
Changes in deferred income tax arising from temporary differences	(51,916)	(14,294)	(13,341)
Changes in deferred income tax arising from tax credit carryforwards	(2,667)	672	627
Income tax charged directly to equity	875	2,262	2,111
Income tax expense	₩ 29,662	₩ 59,317	\$ 55,364

The reconciliation between income tax expense at the effective income tax rates of the Company and accounting profit before income tax at the Korea statutory tax rate for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Accounting profit before income tax	₩ 153,371	₩ 209,698	\$ 195,723
Tax at the statutory income tax rate	36,654	50,285	46,934
Adjustments:			
Non-taxable income (2016: ₩26 million, 2017: ₩27,465 million)	(6)	(6,646)	(6,203)
Non-deductible expenses (2016: ₩11,918 million, 2017: ₩22,642 million)	2,884	5,479	5,113
Tax credits	(1,626)	(2,334)	(2,178)
Others	(8,244)	12,533	11,698
Income tax expense	₩ 29,662	₩ 59,317	\$ 55,364
Effective income tax rates	19.34%	28.29%	28.29%

Income tax charged directly to equity for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Gain on valuation of available-for-sale financial assets	₩ 412	₩ 2,473	\$ 2,308
Re-measurement loss on defined benefit liabilities	463	(211)	(197)
	₩ 875	₩ 2,262	\$ 2,111

Changes in deferred income tax assets and liabilities for the years ended December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016			
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Ending balance
Valuation of derivatives	₩ (5,012)	₩ 4,762	₩ -	₩ (250)
Loss on impairment of investments	10,558	452	-	11,010
Investments in subsidiaries and associates	45,223	9,415	-	54,638
Provisions for severance liability	16,854	69	463	17,386
Severance insurance deposits	(13,270)	(244)	-	(13,514)
Debt restructuring	(4,067)	(52)	-	(4,119)

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

	2016				
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Ending balance	
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	
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	31,100	(263)	-	30,837	
	123,320	51,041	875	175,236	
Tax credit carryforwards	1,969	2,667	-	4,636	
	₩ 125,289	₩ 53,708	₩ 875	₩ 179,872	

	2017				
	Beginning balance	Business combination	Recognized in profit or loss	Recognized directly to equity	Ending balance
Valuation of derivatives	₩ (250)	₩ -	₩ (904)	₩ -	₩ (1,154)
Loss on impairment of investments	11,010	666	8,342	-	20,018
Investments in subsidiaries and associates	54,638	-	21,075	-	75,713
Provisions for severance liability	17,386	7,377	1,671	(211)	26,223
Severance insurance deposits	(13,514)	(6,976)	(5,403)	-	(25,893)
Debt restructuring	(4,119)	-	124	-	(3,995)
Extraordinary loss	22,390	-	(20,583)	-	1,807
Allowance for doubtful accounts	34,378	6,154	(3,161)	-	37,371
Depreciation	26,421	(4,642)	4,057	-	25,836
Capitalized borrowing costs	(25,470)	-	913	-	(24,557)
Accrued expenses	18,221	24	(3,015)	-	15,230
Conversion of debt to equity	1,812	-	(1,812)	-	-
Foreign currency translation	703	-	(22)	-	681
Valuation of available-for-sale financial assets	(6,746)	-	-	2,473	(4,273)
Financial guarantee liabilities	6,041	-	(1,412)	-	4,629
Borrowings with low interest rates	(1,096)	-	483	-	(613)
Forgivable borrowings	2,594	-	(8,707)	-	(6,113)
Others	30,837	4,578	20,386	-	55,801
	175,236	7,181	12,032	2,262	196,711
Tax credit carryforwards	4,636	-	(672)	-	3,964
	₩ 179,872	₩ 7,181	₩ 11,360	₩ 2,262	₩ 200,675

U. S. dollar in thousands (Note 2)	\$ 167,885	\$ 6,702	\$ 10,604	\$ 2,111	\$ 187,302
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## **28. Earnings per share**

### **28.1 Basic earnings per share**

Basic earnings per share for the years ended December 31, 2016 and 2017 are calculated as follows (Korean won in millions, except for per share amounts):

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Profit for the year attributable to ordinary equity holders	₩ 123,709	₩ 150,381	\$ 140,359
Weighted average number of ordinary shares outstanding	113,876,291	121,839,512	121,839,512
Basic earnings per share (Korean won and U.S dollar)	₩ 1,086	₩ 1,234	\$ 1.15

Details of weighted average number of ordinary shares outstanding for the years ended December 31, 2016 and 2017 are as follows:

	2016		
	Number of outstanding shares	Number of days outstanding	Weighted number of shares
Beginning balance	113,876,291	366/366	113,876,291
	2017		
	Number of outstanding shares	Number of days outstanding	Weighted number of shares
Beginning balance	113,876,291	365/365	113,876,291
Issuance of capital stock due to business combination	9,498,858	306/365	7,963,426
Acquisition of treasury stock	(258)	290/365	(205)
	123,374,891		121,839,512

### **28.2 Diluted earnings per share**

Diluted earnings per share for the years ended December 31, 2016 and 2017 are the same as basic earnings per share as the Company does not have any dilutive potential shares.

## 29. Financial instruments

### 29.1 Capital risk management

The primary objective of the Company'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 Company may adjust the dividend payment to shareholders.

The Company monitors capital using a gearing ratio, which is net borrowings divided by total equity. The Company 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)	
	2016	2017	2017	
Total borrowings (A)	₩ 2,981,811	₩ 3,316,467	\$ 3,095,452	
Cash and cash equivalents (B)	(43,922)	(44,350)	(41,394)	
Net borrowings (A-B)	₩ 2,937,889	₩ 3,272,117	\$ 3,054,058	
Total equity (D)	₩ 2,430,937	₩ 2,775,626	\$ 2,590,653	
Gearing ratio ((A-B)/D)	121%	118%	118%	

### 29.2 Financial instruments by category

Financial assets by category as at December 31, 2016 and 2017 are as follows (Korean won in millions):

	2016			
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Total
Cash and cash equivalents	₩ -	₩ 43,922	₩ -	₩ 43,922
Trade and other receivables	-	3,494,714	-	3,494,714
Other current financial assets	-	3,083	-	3,083
Derivative financial assets	41,047	-	-	41,047
Non-current trade and other receivables	-	449,173	-	449,173
Other non-current financial assets	-	8	98,705	98,713
	₩ 41,047	₩ 3,990,900	₩ 98,705	₩ 4,130,652

## 29.2 Financial instruments by category (cont'd)

2017				
	Financial asset at fair value through profit or loss	Loans and receivables	Available-for-sale financial assets	Total
Cash and cash equivalents	₩ -	₩ 44,350	₩ -	₩ 44,350
Trade and other receivables	-	3,518,262	-	3,518,262
Other current financial assets	-	84	-	84
Derivative financial assets	51,066	-	-	51,066
Non-current trade and other receivables	-	412,817	-	412,817
Other non-current financial assets	-	12	89,583	89,595
	₩ 51,066	₩ 3,975,525	₩ 89,583	₩ 4,116,174
U. S. dollar in thousands (Note 2)	\$ 47,663	\$ 3,710,589	\$ 83,613	\$ 3,841,865

Financial liabilities by category as at December 31, 2016 and 2017 are as follows (Korean won in millions):

2016			
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Trade and other payables	₩ -	₩ 1,657,860	₩ 1,657,860
Borrowings	-	1,470,792	1,470,792
Current portion of bonds	-	294,733	294,733
Derivative financial liabilities	71,804	-	71,804
Non-current trade and other payables	-	28,430	28,430
Long-term borrowings	-	456,809	456,809
Bonds	-	759,477	759,477
	₩ 71,804	₩ 4,668,101	₩ 4,739,905

2017			
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Total
Trade and other payables	₩ -	₩ 1,753,404	₩ 1,753,404
Borrowings	-	1,745,978	1,745,978
Current portion of bonds	-	463,736	463,736
Derivative financial liabilities	43,454	-	43,454
Non-current trade and other payables	-	23,862	23,862
Long-term borrowings	-	372,553	372,553
Bonds	-	734,200	734,200
	₩ 43,454	₩ 5,093,733	₩ 5,137,187
U. S. dollar in thousands (Note 2)	\$ 40,558	\$ 4,754,278	\$ 4,794,836

## 29.2 Financial instruments by category (cont'd)

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

	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	₩ -	₩ (40,357)	₩ -	₩ -	₩ -	₩ (40,357)
Other income (expenses):						
Other bad debt expense	-	(42,719)	-	-	-	(42,719)
Reversal of allowance for doubtful accounts	-	471	-	-	-	471
Loss on impairment of available-for-sale financial assets	-	-	(182)	-	-	(182)
Gain on disposal of available-for-sale financial assets	-	-	13	-	-	13
Loss on disposal of available-for-sale financial assets	-	-	(530)	-	-	(530)
Finance income (cost):						
Interest income	-	35,400	-	-	-	35,400
Interest expenses	-	-	-	-	(43,150)	(43,150)
Dividend income	-	-	446	-	-	446
Gain (loss) on foreign currency translation	-	116,330	-	-	(117,823)	(1,493)
Gain (loss) on valuation of derivatives	71,723	-	-	(59,009)	-	12,714
Gain (loss) on settlement of derivatives	252,895	-	-	(267,605)	-	(14,710)
Loss on disposal of trade receivables	-	(16,915)	-	-	-	(16,915)
Other comprehensive income	-	-	(1,705)	-	-	(1,705)
	₩ 324,618	₩ 52,210	₩ (1,958)	₩ (326,614)	₩ (160,973)	₩ (112,717)

Profit or loss by category of financial instruments for the year ended December 31, 2017 are as follows (Korean won in millions):

	2017					
	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	₩ -	₩ (75,929)	₩ -	₩ -	₩ -	₩ (75,929)
Other income (expenses):						
Other bad debt expense	-	(2,930)	-	-	-	(2,930)
Reversal of allowance for doubtful accounts	-	263	-	-	-	263
Loss on impairment of available-for-sale financial assets	-	-	-	-	-	-
Gain on disposal of available-for-sale financial assets	-	-	110	-	-	110
Loss on disposal of available-for-sale financial assets	-	-	(22)	-	-	(22)
Finance income (cost):						
Interest income	-	29,783	-	-	-	29,783
Interest expenses	-	-	-	-	(72,543)	(72,543)
Dividend income	-	-	455	-	-	455
Gain (loss) on foreign currency translation	-	160,736	-	-	(167,414)	(6,678)
Gain (loss) on valuation of derivatives	90,897	-	-	(75,501)	-	15,396
Gain (loss) on settlement of derivatives	188,645	-	-	(215,976)	-	(27,331)
Loss on disposal of trade receivables	-	(31,817)	-	-	-	(31,817)
Other comprehensive income	-	-	(10,219)	-	-	(10,219)
	₩ 279,542	₩ 80,106	₩ (9,676)	₩ (291,477)	₩ (239,957)	₩ (181,462)
U. S. dollar in thousands (Note 2)	\$ 260,913	\$ 74,768	\$ (9,031)	\$ (272,052)	\$ (223,966)	\$ (169,368)

## 29.3 Financial risk management

The Company is exposed to market risk (foreign currency risk and interest rate risk), credit risk, and liquidity risk. The primary purpose of Company's financial risk management is to detect potential risk which could decrease the Company's profit and to eliminate, reduce and hedge such risk to an acceptable level. The Company uses derivative financial instruments for hedging special risk such as foreign currency risk. Financial risk management policy of the Company 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 Company 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, 2016 and 2017, significant monetary assets and liabilities denominated in major foreign currencies, other than functional currencies are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)	
	2016		2017		2017	
	Asset	Liability	Asset	Liability	Asset	Liability
USD	₩ 3,436,337	₩ 3,239,730	₩ 2,838,922	₩ 3,085,954	\$ 2,649,731	\$ 2,880,301
JPY	34,120	24,342	38,013	25,419	35,480	23,725
EUR	428,916	314,908	522,010	229,215	487,222	213,940

Effects of fluctuation in foreign exchange rates on the Company's functional currency by 10% on profit for the year ended December 31, 2017 are as follows (Korean won in millions):

	Increase by 10%		Decrease by 10%	
USD	₩	(24,703)	₩	24,703
JPY		1,259		(1,259)
EUR		29,280		(29,280)

### 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 Company's exposure to the risk of changes in market interest rates relates primarily to the Company's borrowings and bonds with floating interest rates.

As at December 31, 2017, with all other variables remaining constant, a change of 1% in the floating interest rate on borrowings will have an effect of ₩8,553 million (\$7,983 thousand) on the Company'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 Company'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 Company'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 Company'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 Company 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.

### 29.3.2.3 Maximum exposure to credit risk

As at December 31, 2016 and 2017, the maximum exposure to credit risk of the Company is as follows:

	Korean won in millions		U. S. dollar in thousands (Note 2)
	2016	2017	2017
Cash and cash equivalents	₩ 43,922	₩ 44,350	\$ 41,394
Trade and other receivables	3,494,714	3,518,262	3,283,799
Other current financial assets	3,083	84	78
Derivative financial assets	41,047	51,066	47,663
Non-current trade and other receivables	449,173	412,817	385,306
Other non-current financial assets	98,713	89,595	83,624
Financial guarantee contract	758,931	650,912	607,534
	₩ 4,889,583	₩ 4,767,086	\$ 4,449,398

### 29.3.2.4 Aging analysis of financial instruments

Aging analysis of non-derivative financial instruments as at December 31, 2017 is as follows (Korean won in millions):

	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	₩ 44,350	₩ 44,350	₩ -	₩ -	₩ -	₩ -	₩ -
Trade and other receivables	3,518,262	3,154,323	62,734	70,580	16,467	10,687	203,471
Other current financial assets	84	84	-	-	-	-	-
Non-current trade and other receivables	412,817	412,817	-	-	-	-	-
Other non-current financial assets	89,595	89,595	-	-	-	-	-
	₩ 4,065,108	₩ 3,701,169	₩ 62,734	₩ 70,580	₩ 16,467	₩ 10,687	₩ 203,471
U. S. dollar in thousands (Note 2)	\$ 3,794,201	\$ 3,454,516	\$ 58,553	\$ 65,876	\$ 15,370	\$ 9,975	\$ 189,911

### 29.3.3 Liquidity risk

The Company establishes short and long-term capital management plans and analyzes and reviews cash flow budgets against actual cash outflow in order to match the maturity of financial liabilities and financial assets. The Company 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, 2017, 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	₩ 1,753,404	₩ 4,192	₩ 308	₩ 1,757,904
Derivative financial liabilities	43,454	-	-	43,454
Borrowings	1,774,477	252,108	190,721	2,217,306
Bonds	489,569	755,491	-	1,245,060
Financial guarantee liabilities	166,242	105,426	379,244	650,912
	₩ 4,227,146	₩ 1,117,217	₩ 570,273	₩ 5,914,636
U. S. dollar in thousands (Note 2)	\$ 3,945,441	\$ 1,042,764	\$ 532,269	\$ 5,520,474

(\*1) The maximum amount of guarantees that can be borne by the Company as a result of the financial guarantee contracts at the end of the reporting period is as follows in Note 18.

### 29.3.4 Changes in liabilities from financial activities

Changes in liabilities from financial activities as at December 31, 2017 are as follows (Korean won in millions):

	2017						
	Beginning balance	Business combination	Cash flows from financial activities	Exchange rate changes	Transfer of current portion	Others	Ending balance
Short-term borrowings	₩ 1,470,792	₩ 398,953	₩ (220,704)	₩ (61,496)	₩ 231,709	₩ (73,276)	₩ 1,745,978
Liquid bond	294,733	-	(284,044)	(12,443)	474,210	(8,720)	463,736
Bond	759,477	129,856	338,150	(20,237)	(474,210)	1,164	734,200
Long-term borrowings	456,809	8,250	111,301	(13,155)	(231,709)	41,057	372,553
	₩ 2,981,811	₩ 537,059	₩ (55,297)	₩ (107,331)	₩ -	₩ (39,775)	₩ 3,316,467
U. S. dollar in thousands (Note 2)	\$ 2,783,098	\$ 501,268	\$ (51,612)	\$ (100,178)	\$ -	\$ (37,124)	\$ 3,095,452

### 29.4 Fair value of financial instruments

Book value and fair value of financial instruments as at December 31, 2016 and 2017 are as follows:

	Korean won in millions				U. S. dollar in thousands (Note 2)	
	2016		2017		2017	
	Book value	Fair value	Book value	Fair value	Book value	Fair value
<b>Financial assets</b>						
Financial assets carried at amortized cost:						
Cash and cash equivalents	₩ 43,922	₩ 43,922	₩ 44,350	₩ 44,350	\$ 41,394	\$ 41,394
Trade and other receivables	3,494,714	3,494,714	3,518,262	3,518,262	3,283,799	3,283,799
Other current financial assets	3,083	3,083	84	84	78	78
Non-current trade and other receivables	449,173	449,173	412,817	412,817	385,306	385,306
Other non-current financial assets	8	8	707	707	660	660
	3,990,900	3,990,900	3,976,220	3,976,220	3,711,237	3,711,237
Financial assets carried at fair value:						
Derivative financial assets	41,047	41,047	51,066	51,066	47,663	47,663
Available-for-sale financial assets(*1)	57,605	57,605	47,385	47,385	44,227	44,227
	98,652	98,652	98,451	98,451	91,890	91,890
	₩ 4,089,552	₩ 4,089,552	₩ 4,074,671	₩ 4,074,671	\$ 3,803,127	\$ 3,803,127
<b>Financial liabilities</b>						
Financial liability carried at amortized cost:						
Trade and other payables	₩ 1,657,860	₩ 1,657,860	₩ 1,753,404	₩ 1,753,404	\$ 1,636,554	\$ 1,636,554
Current portion of borrowings	1,470,792	1,470,792	1,745,978	1,745,978	1,629,623	1,629,623
Current portion of bonds	294,733	298,112	463,736	465,138	432,832	434,140
Non-current trade and other payables	28,430	28,430	23,862	23,862	22,272	22,272
Borrowings	456,809	456,809	372,553	372,553	347,725	347,725
Bonds	759,477	772,589	734,200	739,607	685,272	690,318
	4,668,101	4,684,592	5,093,733	5,100,542	4,754,278	4,760,632
Financial liability carried at fair value:						
Derivative financial liabilities	71,804	71,804	43,454	43,454	40,558	40,558
	71,804	71,804	43,454	43,454	40,558	40,558
	₩ 4,739,905	₩ 4,756,396	₩ 5,137,187	₩ 5,143,996	\$ 4,794,836	\$ 4,801,190

(\*1) 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 Company 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.

The fair values of financial instruments by fair value hierarchy as at December 31, 2017 are as follows:

	Level 1		Level 2		Level 3		Total
Assets measured at fair value:							
Available-for-sale financial assets	₩	19,785	₩	17,917	₩	9,683	₩ 47,385
Derivative financial assets		-		51,066		-	51,066
Assets for which fair values are disclosed:							
Cash and cash equivalents		-		44,350		-	44,350
Trade and other receivables		-		-		3,518,262	3,518,262
Other current financial assets		-		84		-	84
Non-current trade and other receivables		-		-		412,817	412,817
Other non-current financial assets		-		707		-	707
Investment properties		-		-		172,420	172,420
Liabilities measured at fair value:							
Derivative financial liabilities		-		43,454		-	43,454
Liabilities for which fair values are disclosed:							
Trade and other payables		-		-		1,753,404	1,753,404
Short-term borrowings		-		1,745,978		-	1,745,978
Current-portion of bonds		-		465,138		-	465,138
Non-current trade and other payables		-		-		23,862	23,862
Long-term borrowings		-		372,553		-	372,553
Bonds		-		739,607		-	739,607

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.



### 30.1 Fair value hierarchy (cont'd)

The Company 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 Company used the risk-free interest rate of 2.26% and market risk premium of 9.58% 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, 2016 and 2017 and the related account balances outstanding as at December 31, 2016 and 2017 are summarized as follows (Korean won in millions):

	2016					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company:						
POSCO	₩ 91,899	₩ -	₩ 91,899	₩ 3,119,860	₩ 107,329	₩ 3,227,189
Subsidiaries:						
POSCO DAEWOO America Corp	₩ 1,109,257	-	₩ 1,109,257	₩ 66,296	₩ 10,090	₩ 76,386
POSCO DAEWOO Deutschland GmbH	378,700	-	378,700	1,626	784	2,410
POSCO DAEWOO Japan Corp.	501,442	-	501,442	32,976	578	33,554
POSCO DAEWOO Singapore Pte. Ltd.	599,213	-	599,213	6,958	989	7,947
POSCO DAEWOO Italia S.R.L.	351,294	-	351,294	-	2,527	2,527
POSCO DAEWOO Mexico S.A. de C.V.	99,543	-	99,543	-	2,473	2,473
POSCO DAEWOO Shanghai Co., Ltd.	25,905	-	25,905	-	1,980	1,980
POSCO DAEWOO Malaysia Sdn. Bhd.	151,262	-	151,262	-	1,616	1,616
POSCO DAEWOO India Private Ltd.	4	-	4	-	2,643	2,643
POSCO DAEWOO Myanmar Corp.	3	-	3	-	739	739
Daewoo Textile LLC	11,318	7	11,325	62,682	-	62,682
POSCO DAEWOO China Co., Ltd.	241,012	-	241,012	1,207	4,130	5,337
Brasil Saopaulo Steel Processing Center	96	-	96	-	-	-
POSCO DAEWOO Vietnam Co., Ltd.	15,814	-	15,814	33	2,466	2,499
POSCO DAEWOO E&P Canada Corp.	-	547	547	-	-	-
POSCO DAEWOO Power (PNGPOM) Ltd.	1,193	4,297	5,490	-	-	-
POSCO DAEWOO Waigaoqiao Shanghai Co., Ltd.	1,905	-	1,905	17,063	-	17,063
Daewoo Int'l Guangzhou Corp.	1,180	-	1,180	-	491	491
PT. Bio Inti Agrindo	396	784	1,180	-	-	-
Daewoo Power PNG Ltd.	30,085	-	30,085	-	-	-
POSCO DAEWOO Australia Holdings Pty. Ltd.	167	-	167	-	-	-
Associates:						
POSCO Mexico Processing Center Holding LLC	₩ 173,915	₩ -	₩ 173,915	₩ -	₩ -	₩ -
POSCO-ESDC Ltd.	-	-	-	-	1,784	1,784
POSCO IJPC	42,807	-	42,807	-	-	-
Shanghai Lansheng Daewoo Corp.	15,322	-	15,322	-	791	791
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	157,886	-	157,886	2,616	-	2,616
General Medicines Co., Ltd.	5,864	470	6,334	-	-	-
Korea LNG Ltd.	-	6,342	6,342	-	-	-
DMSA/AMSA	-	-	-	72,580	-	72,580
South-East Asia Gas Pipeline Co., Ltd.	-	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	-	-	-

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**31. Related party transactions (cont'd)**

		2016					
		Sales and others			Purchase and others		
		Sales	Others	Total	Purchase	Others	Total
Others:							
POSCO Asia Co., Ltd.	₩	18,018	₩ -	₩ 18,018	₩ 491,949	₩ -	₩ 491,949
POSCO-Vietnam		52,091	-	52,091	44,111	-	44,111
POSCO-Thainox		48,055	-	48,055	44,134	-	44,134
POSCO Assan TST Steel Industry A.S.		264,729	-	264,729	7,263	-	7,263
POSCO-AAPC		2,919	-	2,919	-	-	-
POSCO C&C Co., Ltd.		85,231	-	85,231	98,970	19	98,989
POSCO America Corp.		45,521	-	45,521	-	-	-
Zhangjiagang Pohang Stainless Steel Co., Ltd.		79,757	-	79,757	635	-	635
POSCO-Foshan Steel Processing Center Co., Ltd.		68,829	-	68,829	158	-	158
Companhia Siderurgica Do Pecem		63,688	-	63,688	-	-	-
POSCO-Malaysia Sdn.Bhd.		47,098	-	47,098	9,091	-	9,091
POSCO-ITPC		49,852	-	49,852	-	-	-
POSCO VST Co., Ltd.		104,679	-	104,679	23,030	-	23,030
Other affiliates of POSCO		390,259	533	390,792	287,641	22,074	309,715
	₩	5,330,585	₩ 100,637	₩ 5,431,222	₩ 4,416,668	₩ 163,503	₩ 4,580,171

  

		2017					
		Sales and others			Purchase and others		
		Sales	Others	Total	Purchase	Others	Total
Parent company:							
POSCO(*1)	₩	594,230	₩ -	₩ 594,230	₩ 5,096,615	₩ 119,899	₩ 5,216,514
Subsidiaries:							
POSCO DAEWOO Waigaoqiao Shanghai Co., Ltd.	₩	9,558	₩ -	₩ 9,558	₩ 5,807	₩ -	₩ 5,807
POSCO DAEWOO Vietnam Co., Ltd.		25,620	-	25,620	-	2,727	2,727
POSCO DAEWOO Myanmar Corp.		3	-	3	-	550	550
DAEWOO Power PNG Ltd.		1,612	-	1,612	-	-	-
POSCO South East Asia Pte. Ltd.		14,122	65	14,187	2,798	-	2,798
POSCO DAEWOO Power(PNGPOM) Ltd.		431	5,737	6,168	-	-	-
POSCO DAEWOO America Corp.		1,019,890	-	1,019,890	86,227	3,955	90,182
POSCO DAEWOO Deutschland GmbH		497,653	-	497,653	1,653	537	2,190
POSCO DAEWOO Japan Corp.		591,070	-	591,070	77,089	561	77,650
POSCO DAEWOO Singapore Pte. Ltd.		1,401,587	-	1,401,587	26,694	623	27,317
POSCO DAEWOO Italia S.R.L.		462,805	-	462,805	-	2,967	2,967
POSCO DAEWOO China CO., Ltd.		192,773	-	192,773	465	5,461	5,926
DAEWOO Textile L.L.C.		8,174	-	8,174	77,509	-	77,509
POSCO DAEWOO Australia Holdings Pty. Ltd.		174	3,274	3,448	-	-	-
POSCO DAEWOO E&P Canada Corp.		-	279	279	-	-	-
POSCO DAEWOO Mexico S.A. de C.V.		125,039	-	125,039	-	3,825	3,825
POSCO DAEWOO Malaysia Sdn Bhd		260,501	-	260,501	23,469	1,602	25,071
POSCO DAEWOO Shanghai Co., Ltd.		90,172	-	90,172	-	2,638	2,638
POSCO DAEWOO India Private., Ltd.		31,871	-	31,871	-	3,555	3,555
DAEWOO Power And Infra(Pty) Ltd.		526	-	526	-	-	-
Pohang Scrap Recycling Distribution Center Co., Ltd.		-	222	222	92	3,603	3,695
PT. Bio Inti Agrindo		-	815	815	-	-	-
GOLDEN LACE DAEWOO Company Limited		-	-	-	469	-	469
LA SRDC		-	-	-	8,768	-	8,768
DAEWOO Global Development Pte. Ltd.		2,244	-	2,244	-	-	-
Daewoo Amara Company Limited		378	-	378	-	-	-

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**31. Related party transactions (cont'd)**

	2017					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
<b>Associates:</b>						
POSCO Mexico Processing Center Holding, L.L.C.	₩ 267,740	₩ -	₩ 267,740	₩ 326	₩ -	₩ 326
SPH	50	-	50	-	-	-
Yulchon Mexico S.A. DE C.V.	893	-	893	-	-	-
POSCO IJPC	53,756	-	53,756	29	-	29
Sebang Steel	473	-	473	19,362	-	19,362
Shanghai Lansheng Daewoo Corp.	245	-	245	-	257	257
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	43,764	-	43,764	-	-	-
General Medicines Co., Ltd.	6,889	441	7,330	-	-	-
Korea LNG Ltd.	-	6,439	6,439	-	-	-
South-East Asia Gas Pipeline Co., Ltd.	-	61,989	61,989	-	-	-
PT Batutua Tembaga Raya	-	-	-	21,024	-	21,024
POSCO-ESDC Ltd.	-	-	-	-	2,732	2,732
DMSA/AMSA	-	95	95	47,092	-	47,092
Global Komsco DAEWOO L.L.C.	-	-	-	14,754	-	14,754
<b>Others:</b>						
POSCO C&C Co., Ltd.	₩ 117,428	₩ -	₩ 117,428	₩ 228,575	₩ 14	₩ 228,589
POSCO America Corp.	112,105	-	112,105	134	-	134
POSCO Asia Co., Ltd.	52,172	-	52,172	657,683	12	657,695
Zhangjiagang Pohang Stainless Steel Co., Ltd.	101,633	-	101,633	426	-	426
POSCO ENERGY CO., LTD.	24,638	-	24,638	-	-	-
POSCO-Foshan Steel Processing Center Co., Ltd.	55,628	-	55,628	-	-	-
POSCO-Vietnam Co., Ltd.	91,930	-	91,930	75,075	-	75,075
Companhia Siderurgica Do Pecem	67,261	-	67,261	115,397	209	115,606
POSCO-Thainox	100,583	-	100,583	75,693	-	75,693
POSCO-Malaysia Sdn. Bhd.	60,046	-	60,046	10,075	-	10,075
POSCO-ITPC	80,283	-	80,283	-	-	-
POSCO VST Co., Ltd.	133,695	-	133,695	38,320	-	38,320
POSCO Maharashtra Steel Private. Ltd.	42,717	-	42,717	174,206	-	174,206
POSCO-AAPC	30,818	-	30,818	-	-	-
POSCO SS-VINA	198,690	-	198,690	9,082	-	9,082
POSCO Assan TST Steel Industry A.S.	354,424	-	354,424	55,754	-	55,754
PT. Krakatau POSCO	-	-	-	243,175	-	243,175
Other affiliates of POSCO	684,779	22	684,801	63,640	30,574	94,214
	₩ 8,013,073	₩ 79,378	₩ 8,092,451	₩ 7,257,477	₩ 186,301	₩ 7,443,778
U. S. dollar in thousands (Note 2)	\$ 7,479,068	\$ 74,088	\$ 7,553,156	\$ 6,773,826	\$ 173,886	\$ 6,947,712

(\*1) In addition to the above transactions, dividends paid to POSCO for the years ended December 31, 2017 and 2016 amounted to ₩34,341 million (\$32,052 thousand) and ₩34,341 million (\$32,052 thousand), respectively.

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**31. Related party transactions (cont'd)**

Significant balances outstanding with related parties as at December 31, 2016 and 2017 are summarized as follows (Korean won in millions):

	2016					
	Receivables			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company:						
POSCO	₩ 546	₩ 49	₩ 595	₩ 190,476	₩ 5,206	₩ 195,682
Subsidiary:						
POSCO DAEWOO America Corp.	₩ 337,342	₩ 11,089	₩ 348,431	₩ 22,986	₩ 3,021	₩ 26,007
POSCO DAEWOO Deutschland GmbH	175,053	-	175,053	-	86	86
POSCO DAEWOO Japan Corp.	40,591	-	40,591	182	164	346
POSCO DAEWOO Singapore Pte. Ltd.	166,699	-	166,699	-	41,411	41,411
POSCO DAEWOO Italia S.R.L.	104,355	-	104,355	-	169	169
POSCO DAEWOO Mexico S.A. de C.V.	64,669	-	64,669	-	339	339
POSCO DAEWOO Shanghai Co., Ltd.	16,814	-	16,814	-	142	142
POSCO DAEWOO Malaysia Sdn. Bhd.	41,898	-	41,898	-	110	110
POSCO DAEWOO India Private Ltd.	-	582	582	-	518	518
POSCO DAEWOO Myanmar Corp.	-	-	-	-	63	63
Daewoo Textile LLC	9,957	15,252	25,209	1,287	76	1,363
POSCO DAEWOO China Co., Ltd.	20,688	330	21,018	-	573	573
Brasil Saopaulo Steel Processing Center	27,861	36,293	64,154	-	-	-
POSCO DAEWOO Vietnam Co., Ltd.	8,644	234	8,878	-	249	249
POSCO DAEWOO E&P Canada Corp.	-	19,267	19,267	-	-	-
POSCO DAEWOO Power (PNGPOM) Ltd.	77	8,497	8,574	-	149	149
Daewoo Int'l Guangzhou Corp.	1,279	-	1,279	-	-	-
PT. Bio Inti Agrindo	1,534	30,658	32,192	-	892	892
Daewoo Power PNG Ltd.	8,578	994	9,572	-	879	879
POSCO DAEWOO Australia Holdings Pty. Ltd.	46	-	46	-	-	-
Associate:						
POSCO Mexico Processing Center Holding LLC	₩ 76,513	₩ -	₩ 76,513	₩ -	₩ -	₩ -
POSCO-ESDC Ltd.	-	-	-	-	-	-
POSCO IJPC	15,630	-	15,630	-	-	-
Shanghai Lansheng Daewoo Corp.	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	-	93,994	93,994	-	-	-
South-East Asia Gas Pipeline Co., Ltd.	-	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	-	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

**POSCO DAEWOO Corporation**  
**Notes to the separate financial statements**  
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**31. Related party transactions (cont'd)**

2016								
	Receivables			Payables				
	Trade receivables	Others	Total	Trade payables	Others	Total		
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 Steel Industry A.S.	173,062	207	173,269	1,053	193	1,246		
POSCO-AAPC	164	-	164	-	-	-		
POSCO C&C Co., Ltd.	7,534	-	7,534	11,932	5	11,937		
POSCO America Corp.	6,506	-	6,506	-	-	-		
Zhangjiagang Pohang Stainless Steel Co., Ltd.	9,565	28	9,593	-	-	-		
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	-	-	-		
POSCO VST Co., Ltd.	51,963	-	51,963	880	-	880		
Other affiliates of POSCO	94,416	2,050	96,466	25,218	14,008	39,226		
	₩ 1,617,481	₩ 536,873	₩ 2,154,354	₩ 446,064	₩ 68,915	₩ 514,979		

  

2017								
	Receivables			Payables				
	Trade receivables	Others	Total	Trade payables	Others	Total		
Parent company:								
POSCO	₩ 19,900	₩ 70	₩ 19,970	₩ 475,066	₩ 19,297	₩ 494,363		
Subsidiary:								
POSCO DAEWOO Waigaiqiao Shanghai CO., LTD.	₩ 1,022	₩ -	₩ 1,022	₩ -	₩ -	₩ -		
PT. Bio Inti Agrindo(*2)	-	30,056	30,056	-	792	792		
POSCO DAEWOO Vietnam Co., Ltd.	10,668	45	10,713	-	189	189		
POSCO DAEWOO E&P Canada Corp. (*2)	-	17,531	17,531	-	-	-		
DAEWOO Power PNG Ltd.	-	658	658	-	779	779		
POSCO South East Asia Pte. Ltd. (*2)	-	8,571	8,571	-	-	-		
POSCO DAEWOO Power(PNGPOM) Ltd. (*2)	-	3,546	3,546	-	68	68		
POSCO DAEWOO America Corp.	259,758	4,751	264,509	13,415	11,889	25,304		
POSCO DAEWOO Deutschland GmbH.	197,196	-	197,196	192	36	228		
POSCO DAEWOO Japan Corp.	60,892	-	60,892	6,901	70	6,971		
POSCO DAEWOO Singapore Pte. Ltd.	155,587	-	155,587	3,289	59	3,348		
POSCO DAEWOO Italia S.R.L.	152,117	-	152,117	-	224	224		
POSCO DAEWOO China Co., Ltd.	10,267	312	10,579	2	541	543		
DAEWOO Textile L.L.C.	4,454	17,930	22,384	809	34	843		
POSCO DAEWOO Australia Holdings Pty. Ltd.	46	-	46	-	-	-		
POSCO DAEWOO Mexico S.A. de C.V.	37,668	-	37,668	-	324	324		
DAEWOO Int'l Guangzhou Corp.	1,134	-	1,134	-	-	-		
POSCO DAEWOO Malaysia Sdn Bhd	31,914	1,305	33,219	6,390	1,451	7,841		
POSCO DAEWOO Shanghai Co., Ltd.	36,893	-	36,893	-	656	656		
POSCO DAEWOO India Pvt., Ltd.	2,667	547	3,214	-	427	427		
Brasil Saopaulo Steel Processing Center(*2)	24,846	32,175	57,021	-	-	-		
POSCO DAEWOO Myanmar Corp. Ltd.	3	-	3	-	24	24		
Pohang Scrap Recycling Distribution Center Co., Ltd.	-	-	-	-	449	449		
GOLDEN LACE DAEWOO Company Limited	-	813	813	-	-	-		
LA SRDC	-	-	-	1,250	-	1,250		
DAEWOO Global Development Pte. Ltd.	-	2,258	2,258	-	60	60		

**POSCO DAEWOO Corporation**  
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**31. Related party transactions (cont'd)**

	2017					
	Receivables			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Associate:						
POSCO Mexico Processing Center Holding, L.L.C.	₩ 93,452	₩ 5	₩ 93,457	₩ 321	₩ -	₩ 321
SPH	5	-	5	-	-	-
PT Batutua Tembaga Raya(*2)	-	29,048	29,048	3	-	3
Yulchon Mexico S.A. DE C.V.	402	-	402	-	-	-
POSCO IJPC	11,790	-	11,790	-	-	-
Shanghai Lansheng Daewoo Corp.	95	-	95	-	319	319
Shanghai Waigaogiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	2,082	-	2,082	-	526	526
General Medicines Co., Ltd.	2,481	-	2,481	-	37	37
DMSA/AMSA(*2)	-	793	793	-	-	-
South-East Asia Gas Pipeline Co., Ltd. (*2)	-	75,702	75,702	-	-	-
Global Komsco DAEWOO L.L.C.	-	229,880	229,880	-	-	-
POSCO-ESDC Ltd.	-	600	600	247	41	288
Sebang Steel	-	-	-	-	143	143
POSCO Mexico Processing Center Holding, L.L.C.	-	-	-	50	-	50
Others:						
POSCO C&C Co., Ltd.	4,904	-	4,904	16,973	-	16,973
POSCO America Corp.	1,279	-	1,279	-	-	-
POSCO Asia Co., Ltd.	7,348	-	7,348	200,002	-	200,002
Zhangjiagang Pohang Stainless Steel Co., Ltd.	12,590	-	12,590	-	-	-
POSCO ENERGY CO., LTD.	-	-	-	-	5,654	5,654
POSCO-Foshan Steel Processing Center Co., Ltd.	6,217	-	6,217	-	-	-
POSCO-Vietnam Co., Ltd.	25,486	-	25,486	4,229	-	4,229
Companhia Siderurgica Do Pecem	27,205	13,353	40,558	-	-	-
POSCO-Thainox	10,649	-	10,649	4,198	-	4,198
POSCO-Malaysia Sdn. Bhd.	2,246	-	2,246	660	-	660
POSCO-ITPC	16,891	-	16,891	-	-	-
POSCO VST Co., Ltd.	50,211	-	50,211	2,120	-	2,120
POSCO Maharashtra Steel Pvt. Ltd.	-	-	-	18,672	-	18,672
POSCO-AAPC	2,366	-	2,366	-	-	-
POSCO SS-VINA	135,058	-	135,058	1,417	-	1,417
POSCO Assan TST Steel Industry A.S.	249,677	139	249,816	2,821	143	2,964
PT. Krakatau POSCO	-	-	-	19,006	-	19,006
Other affiliates of POSCO	185,509	12	185,521	9,249	4,250	13,499
	₩ 1,854,975	₩ 470,100	₩ 2,325,075	₩ 787,282	₩ 48,482	₩ 835,764
U. S. dollar in thousands (Note 2)	\$ 1,731,356	\$ 438,772	\$ 2,170,128	\$ 734,816	\$ 45,251	\$ 780,067

(\*1) A provision for the trade receivable amounts to ₩29,736 million (\$27,754 thousand) and 34,195 million (\$31,916 thousand) as at December 31, 2017 and 2016, respectively.

### 31. Related party transactions (cont'd)

(\*2) During the year ended December 31, 2017, changes in loan investment included the above other receivables as follows:

	Korean won in millions					
	Beginning balance	Increase (Include capitalized interest)	Decrease	Transfer to equity	Foreign exchange translation and others	Ending balance
PT. Batutua Tembaga Raya	₩ 32,070	₩ -	₩ -	₩ -	₩ (3,022)	₩ 29,048
POSCO DAEWOO Power(PNGPOM) Ltd..	7,160	906	(3,809)	-	(745)	3,512
DMSA/AMSA	90,638	2,956	-	(13,712)	(10,169)	69,713
South-East Asia Gas Pipeline Company Ltd.	276,605	28,967	(46,252)	-	(29,440)	229,880
POSCO South East Asia Pte. Ltd.	-	8,954	-	-	(383)	8,571
POSCO DAEWOO E&P Canada Corp.	18,038	-	-	-	(848)	17,190
PT. Bio Inti Agrindo	29,463	2,978	-	-	(3,352)	29,089
Brasil Saopaulo Steel Processing Center	36,255	-	-	-	(4,113)	32,142
	₩ 490,229	₩ 44,761	₩ (50,061)	₩ (13,712)	₩ (52,072)	₩ 419,145
	\$ 457,559	\$ 41,778	\$ (46,725)	\$ (12,798)	\$ (48,602)	\$ 391,212

#### 31.1 Key management personnel compensation

Compensations for key management personnel for the years ended December 31, 2016 and 2017 are as follows:

	Korean won in millions		U. S. dollar
	2016	2017	in thousands (Note 2)
Salaries	₩ 11,991	₩ 16,605	\$ 15,498
Long-term employee benefits	-	1,651	1,541
Severance and retirement benefits	1,760	2,117	1,976
	₩ 13,751	₩ 20,373	\$ 19,015

#### 31.2 Guarantees provided to related parties

Guarantees provided to related parties as at December 31, 2016 and 2017 are as follows (Korean won in millions):

	Limit amount		Outstanding balance	
	2016	2017	2016	2017
Subsidiaries:				
DAEWOO Textile LLC	₩ 9,668	₩ 4,286	₩ 9,668	₩ 4,286
PT. Bio Inti Agrindo	113,147	129,505	113,147	129,505
POSCO DAEWOO India Pvt.,Ltd.	199,403	296,887	165,594	88,959
DAEWOO Power PNG Ltd.	65,742	58,284	43,506	58,284
DAEWOO Global Development Pte. Ltd.	-	23,178	-	23,178
Associates:				
Global Komsco Daewoo LLC	11,103	8,812	9,940	8,812
Others:				
POSCO Assan TST Steel Industry A.S.	17,708	15,699	17,708	15,699
	₩ 416,771	₩ 536,651	₩ 359,563	₩ 328,723
U. S. dollar in thousands (Note 2)	\$ 388,997	\$ 500,888	\$ 335,601	\$ 306,816

## **32. Business combination**

In accordance with the resolution made by the Board of Directors on November 4, 2016, the Company merged with a steel and other business divisions of POSCO P&S Co., Ltd. on March 1, 2017. As a result of the combination of subsidiaries under common control of POSCO Co., Ltd., the assets and liabilities of the business sector of the merged company are recognized as book values. Details of the merger are as follows.

The main features of the merger are as follows:

	Description of Merger
Type of merger	Small-scale merger
Mergee	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 2, 2017
Ratio of merger	POSCO DAEWOO Corporation : POSCO P&S = 1 : 0.4387662 (Split merger ratio)

### **32.1 Accounting for the merger**

The assets and liabilities of the merged company are recognized as book values as at the merger date. The difference in the new issue price of shares after the merger and book values of net assets acquired was accounted for as capital surplus.

Book values of major assets and liabilities of POSCO P&S acquired from the merger are as follows (Korean won in millions):

	2017
Consideration transferred	
Newly issued shares	
(number of share issued: 9,498,858 / capital stock : ₩47,494 million)	₩ 233,197
	<u>233,197</u>
Assets and liabilities acquired	
Current assets	
Cash and cash equivalents	22,150
Trade and other receivables	473,569
Inventories	221,526
Other current assets	16,262
Non-current assets	
Trade and other receivables	3,156
Investment stocks	15,576
Tangible assets, intangible assets and investment properties	371,129
Deferred income tax assets	6,529
Other non-current assets	749
Defined benefit assets	357
Current liabilities	
Trade and other payables	(321,813)
Borrowings	(398,953)
Other current liabilities	(7,431)
Non-current liabilities	
Debenture and borrowings	(138,106)
Other payables	(6,185)



### 32.1 Accounting for the merger (cont'd)

	2017
Other non-current liabilities	(179)
	258,336
Difference (capital surplus)	(25,139)
	₩ 233,197
U. S. dollar in thousands (Note 2)	\$ 217,656

### 32.2 Business combination effect

If the business combination was established on January 1, 2017, the Company's sales would have been ₩21,437,971 million (\$ 20,009,307 thousand) and its current net profit would have been ₩141,321 million (\$131,903 thousand).

### 33. Events after reporting period

The Company made a resolution to provide payment guarantees for up to USD 150,000 thousand for the increase of the financial limit for POSCO DAEWOO India Pvt. Ltd. at the Board of Directors' meeting held on February 21, 2018.

The Company issued unsecured public bonds ₩200,000 million (\$186,672 thousand) for the financing of operating fund on March 2, 2018.