KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES

Consolidated Financial Statements

December 31, 2018 and 2017

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

To the Shareholders and Board of Directors of Korea Western Power Co., Ltd.:

Opinion

We have audited the consolidated financial statements of Korea Western Power Co., Ltd. and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017 and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Public Corporation and Quasi-governmental Institution Accounting Regulations and Standard.

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

Without qualifying our opinion, we draw attention to the following matter.

As explained in Note 2 to the consolidated financial statements, for those matters not specified in Public Corporation and Quasi-governmental Institution Accounting Regulations and Standard, the consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Public Corporation and Quasi-governmental Institution Accounting Regulations and Standard, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.



Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Group's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Other matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjory Accounting Corp.

Seoul, Korea March 6, 2019

This report is effective as of March 6, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Financial Position As of December 31, 2018 and 2017

In millions of won	Note		2018	2017
Assets				
Cash and cash equivalents Current financial assets Current tax assets Trade and other receivables, net Inventories Current non-financial assets Assets held for sale Total current assets	6,7,38 6,11,12,38 35 6,8,38,39 13 14 15,40,44	₩	67,026 72,210 19,512 593,436 411,900 81,548 747	35,416 53,007 606 653,556 270,054 53,460
Total current assets		_	1,240,379	1,000,099
Non-current financial assets Non-current trade and other receivables, net Property, plant and equipment, net Intangible assets, net Investments in associates and joint ventures Non-current non-financial assets Deferred tax assets Total non-current assets	6,9,10,11,12,28,38,39 6,8,38 17,42 18 16,39,40 14	-	258,461 2,404 8,012,878 19,381 321,995 9,798 386 8,625,303	152,760 63 8,115,149 18,357 268,148 7,861 234 8,562,572
Total assets		₩_	9,871,682	9,628,671

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Financial Position, Continued As of December 31, 2018 and 2017

In millions of won	Note		2018	2017
Liabilities				
Trade and other payables Current financial liabilities Current tax liabilities Current non-financial liabilities Current provisions Total current liabilities	6,19,38,39 6,11,20,21,38 35 24 23	₩ - -	422,654 767,965 2,849 13,135 32,759 1,239,362	246,530 902,030 13,356 18,203 117,242 1,297,361
Non-current trade and other payables Non-current financial liabilities Non-current non-financial liabilities Employee benefits obligations, net Deferred tax liabilities Non-current provisions Total non-current liabilities	6,19,38 6,11,20,21,38 24 22,26,38 35 23,43	<u>-</u>	4,337,323 311 82,374 312,436 84 4,732,528	2,189 4,119,559 244 68,656 258,154 115 4,448,917
Total liabilities		_	5,971,890	5,746,278
Equity				
Share capital Retained earnings Other components of equity Equity attributable to owner of the KOWEPO	25 26,27 9,11,25,28	<u>-</u>	1,272,898 2,572,149 48,497 3,893,544	1,272,898 2,639,262 (36,028) 3,876,132
Non-controlling interests		_	6,248	6,261
Total equity		_	3,899,792	3,882,393
Total liabilities and equity		₩_	9,871,682	9,628,671

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Comprehensive Income For the years ended December 31, 2018 and 2017

In millions of won, except earnings per share information	Note		2018	2017
Sales	5,29,39	₩	4,869,158	4,222,449
Cost of sales	36,39	• •	(4,632,109)	(3,748,802)
Gross profit	,	_	237,049	473,647
Selling and administrative expenses	30,36		(96,488)	(112,163)
Operating income		_	140,561	361,484
Other non-operating income	31		4,725	4,732
Other non-operating expenses	31		(6,580)	(6,123)
Other income (loss), net	32		17,914	(9,351)
Finance income	6,11,33		91,571	172,248
Finance expenses	6,11,34		(215, 155)	(311,071)
Loss from associates and joint ventures	16	_	(36,910)	(63,001)
Profit (loss) before income tax			(3,874)	148,918
Income tax expense	35	_	(30,947)	(46,089)
Profit (loss) for the year		_	(34,821)	102,829
Other comprehensive income (loss), net of tax:				
Items that will never be reclassified to profit or loss	9,22,26			
Remeasurements of benefit liability, net of tax			(4,556)	7,158
Share in other comprehensive income of associates and			070	5.004
joint ventures, net of tax			870	5,604
Net change in the non-current financial assets at fair value			CO C40	
through other comprehensive income, net of tax Items that are or may be reclassified to profit or loss	11,28		69,643	-
Net change in the unrealized fair value of available-for-sale	11,20			
financial assets, net of tax			_	29,721
Net change in the unrealized fair value of derivatives using				20,721
cash flow hedge accounting, net of tax			8,517	(1,512)
Foreign currency translation of foreign operations, net of tax			(2,381)	(1,714)
Share in other comprehensive income (loss) of associates			(=/==-/	(1,7111,7
and joint ventures, net of tax			9,123	(13,486)
Total other comprehensive income, net of tax		_	81,216	25,771
Total comprehensive income for the year		_	46,395	128,600
Profit (loss) attributable to:				
Owner of the KOWEPO			(34,811)	102,813
Non-controlling interests			(10)	162,015
Tron donationing interests		_	(34,821)	102,829
		=	(5.1/5=1/	
Total comprehensive income (loss) attributable to:				
Owner of the KOWEPO			46,408	128,590
Non-controlling interests		_	(13)	10
		-	46,395	128,600
Earnings (loss) per share				
Basic and diluted earnings (loss) per share (in won)	37	₩_	(1,044)	3,085

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Changes in Equity For the year ended December 31, 2017

In millions of won		Equ	uity attributa					
					Other		Non-	
		Share	Retained	Hybrid	components		controlling	Total
		Capital	earnings	securities	of equity	Subtotal	interests	equity
Balance at January 1, 2017	₩	1,272,898	2,593,422	99,750	(49,043)	3,917,027	6,251	3,923,278
Total comprehensive income		.,,_,	_,,,,,,,	557.55	(10/010/	0,0,0	-,	5,525,215
(loss) for the year:								
Profit for the year		_	102,813	-	-	102,813	16	102,829
Net change in the unrealized			,			,		,
fair value of available-for-sale								
financial assets, net of tax		-	_	-	29,721	29,721	-	29,721
Net change in the unrealized					,	,		•
fair value of derivatives using								
cash flow hedge accounting,								
net of tax		-	_	-	(1,512)	(1,512)	-	(1,512)
Remeasurements of benefit								
liability, net of tax		-	7,158	-		7,158	-	7,158
Share in other comprehensive								
income (loss) of associates								
and joint ventures, net of tax		-	5,604	-	(13,486)	(7,882)	-	(7,882)
Foreign currency translation of								
foreign operations, net of tax		-	-	-	(1,708)	(1,708)	(6)	(1,714)
Transactions with owner								
recognized directly in equity:								
Dividends paid		-	(66,992)	-	-	(66,992)	-	(66,992)
Repayment in principal and								
interest of hybrid securities		-	(2,471)	(99,750)	-	(102,221)	-	(102,221)
Others		-	(272)		<u>-</u>	(272)		(272)
Balance at December 31, 2017	₩	1,272,898	2,639,262		(36,028)	3,876,132	6,261	3,882,393

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Changes in Equity, Continued For the year ended December 31, 2018

In millions of won		Eq	uity attributa					
	•				Other		Non-	
		Share	Retained	Hybrid	components		controlling	Total
	. =	Capital	earnings	securities	of equity	Subtotal	interests	equity
Balance at January 1, 2018	₩	1,272,898	2,639,262	-	(36,028)	3,876,132	6,261	3,882,393
Changes in accounting								
policies (Note 3)		-	380	-	(380)	-	-	-
Total comprehensive income								
(loss) for the year:								
Loss for the year		-	(34,811)	-	-	(34,811)	(10)	(34,821)
Net change in the non-current								
financial assets at fair value								
through other comprehensive								
income, net of tax		-	-	-	69,643	69,643	-	69,643
Net change in the unrealized								
fair value of derivatives using								
cash flow hedge accounting,								
net of tax		-	-	-	8,517	8,517	-	8,517
Remeasurements of benefit								
liability, net of tax		-	(4,556)	-	-	(4,556)	-	(4,556)
Share in other comprehensive								
income (loss) of associates								
and joint ventures, net of tax		-	870	-	9,123	9,993	-	9,993
Foreign currency translation of								
foreign operations, net of tax		-	-	-	(2,378)	(2,378)	(3)	(2,381)
Transactions with owner								
recognized directly in equity:								
Dividends paid			(28,996)			(28,996)		(28,996)
Balance at December 31, 2018	₩	1,272,898	2,572,149	-	48,497	3,893,544	6,248	3,899,792

KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Cash Flows For the years ended December 31, 2018 and 2017

In millions of won		2018	2017
Cash flows from operating activities			
Profit (loss) for the year	₩	(34,821)	102,829
Adjustments for:	• •	(0.702.7	.02,020
Income tax expense		30,947	46,089
Depreciation		631,795	587,916
Amortization of intangible assets		4,224	3,316
Loss on disposals of property, plant and equipment, net		9,109	11,964
Loss on disposals of intangible assets, net		5, 105	11,504
Impairment loss on disposals of property, plant and equipment		7,031	39,656
Retirement benefit expenses		20,245	20,930
Interest expense		139,150	122,359
Interest income		(6,496)	(2,086)
Loss from associates and joint ventures		36,910	63,001
Loss (gain) on derivative instruments, net		(69,476)	185,146
Loss (gain) on foreign currency translations, net		35,915	(127,867)
Loss (gain) on foreign currency transactions, net		30,163	(39,591)
Provisions for employee benefits		15,169	41,427
Provisions for renewable portfolio standard		21,293	12,409
Provisions for litigation		21,200	1,802
Provisions for greenhouse gas emission		_	10,046
Provisions for financial guarantee		_	42
Reversal of provisions for employee benefits		(6,599)	-
Reversal of provisions for renewable portfolio standard		(106,654)	(12,025)
Reversal of provisions for litigation		(100,004)	(1,018)
Reversal of provisions for greenhouse gas emission		_	(1,010)
Dividend income		(6,510)	_
Others		(18)	425
Others		786,203	963,941
Changes in:		700,203	303,341
Trade receivables		(4,834)	65,117
Other current receivables		62,805	(141,900)
Other current receivables Other non-current receivables		(84)	78
Inventories		(139,979)	(42,339)
Current non-financial assets		(27,376)	(19,261)
Non-current non-financial assets		1,317	715
Trade payables		152,908	(58,323)
Other current payables		6,980	(12,892)
Other current payables Other non-current payables		0,000	2,250
Current non-financial liabilities		(4,763)	2,905
Non-current non-financial liabilities		(2,071)	2,000
Current provisions		(7,651)	(49, 159)
Non-current provisions		(31)	(45, 155)
Payments of retirement benefit obligations		(10,434)	(8,704)
Increase in plan assets		(2,681)	(6,952)
merease in plan assets		24,106	(268,530)
Cash generated from operating activities:		24,100	(200,000)
Dividend received		7,785	6,248
Interest received		6,503	2,124
Interest received		(141,846)	(136,377)
Income tax paid		(29,672)	(87,119)
Net cash provided by operating activities	₩	618,258	583,116
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KOREA WESTERN POWER CO., LTD. AND SUBSIDIARIES Consolidated Statements of Cash Flows, Continued For the years ended December 31, 2018 and 2017

In millions of won

Cash flows from investing activities W 1,501 1,293 Increase in loans (2,420) (2,895) Increase in guarantee deposits (211) 634 Decrease in sparantee deposits (926) (2,382) Increase in short-term financial instruments (140,000) (50,000) Decrease in short-term financial instruments 140,000 10,000 Cash flow due to loss of control of subsidiary (781) - Acquisition of investments in associates and joint ventures (82,039) (86,392) Proceeds from disposals of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets - 19 Acquisition of intangible assets - 19 Recovernment grants received (repayment) 3,190 16,785		2018	2017
Collection of loans			
Increase in loans (2,420) (2,995) Increase in guarantee deposits 211 634 Decrease in guarantee deposits (2140,000) (50,000) Decrease in short-term financial instruments (140,000) (50,000) Decrease in short-term financial instruments (140,000) (10,000 Cash flow due to loss of control of subsidiary (781) (781) Acquisition of investments in associates and joint ventures (82,039) (86,392) Proceeds from disposals of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) (2,308) Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities (218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (895,700) (656,200) Repayments on hybrid securities - (4,050) Settlement of derivative instruments 32,370 (210,512) Refect of exchange rate fluctuations (854) (764) Effect of exchange rate fluctuations on cash held (864) (210,512) Cash and cash equivalents at beginning of the year 35,416 (246,692) Cash and cash equivalents at beginning of the year 35,416 (246,692)		4 504	1 000
Increase in guarantee deposits			•
Decrease in guarantee deposits (926) (2,382) Increase in short-term financial instruments (140,000) (50,000) Decrease in short-term financial instruments 140,000 10,000 Cash flow due to loss of control of subsidiary (781) - Acquisition of investments in associates and joint ventures (82,039) (86,392) Proceeds from disposals of property, plant and equipment (538,584) (642,423) Acquisition of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from borrowings (178,523) (2,088,712) Proceeds from debentures (916,913 1,196,761 Repayment of beentures (895,700) (656,200) <td< td=""><td></td><td></td><td></td></td<>			
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Decrease in short-term financial instruments 140,000 10,000 Cash flow due to loss of control of subsidiary (781) - Acquisition of investments in associates and joint ventures (82,039) (86,392) Proceeds from disposals of property, plant and equipment 5,577 27,940 Acquisition of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets - 19 Acquisition of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Repayment of borrowings 218,000 1,697,063 Repayment of borrowings 218,000 1,697,063 Repayment of debentures 916,913 1,196,761 Repayment of debentures (289,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - <td></td> <td></td> <td></td>			
Cash flow due to loss of control of subsidiary (781) - Acquisition of investments in associates and joint ventures (82,039) (86,392) Proceeds from disposals of property, plant and equipment 5,577 27,940 Acquisition of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets - 19 Acquisition of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings 218,000 1,697,063 Repayment of debentures 916,913 1,196,761 Repayment of debentures 916,913 1,196,761 Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 6			
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Acquisition of property, plant and equipment (538,584) (642,423) Proceeds from disposals of intangible assets - 19 Acquisition of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Repayment of borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net ash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations on cash held	Acquisition of investments in associates and joint ventures		
Proceeds from disposals of intangible assets 19 Acquisition of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Repayment of borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,371 (210,512) Effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) <td>Proceeds from disposals of property, plant and equipment</td> <td>5,577</td> <td>27,940</td>	Proceeds from disposals of property, plant and equipment	5,577	27,940
Acquisition of intangible assets (139) (2,308) Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Proceeds from borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276)	Acquisition of property, plant and equipment	(538,584)	(642,423)
Government grants received (repayment) 3,190 (5,755) Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginn	Proceeds from disposals of intangible assets	=	19
Decrease (Increase) in other investments (3,847) 2,350 Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Acquisition of intangible assets	(139)	(2,308)
Net cash used in investing activities (618,257) (749,919) Cash flows from financing activities 218,000 1,697,063 Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate fluctuations on cash held 93 - Settlements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the y	Government grants received (repayment)	3,190	(5,755)
Cash flows from financing activities Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Decrease (Increase) in other investments	(3,847)	2,350
Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Net cash used in investing activities	(618,257)	(749,919)
Proceeds from borrowings 218,000 1,697,063 Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692			
Repayment of borrowings (178,523) (2,088,712) Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Cash flows from financing activities		
Proceeds from debentures 916,913 1,196,761 Repayment of debentures (895,700) (656,200) Dividends paid (28,996) (66,992) Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - (764) Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Proceeds from borrowings	218,000	1,697,063
Repayment of debentures Dividends paid (28,996) (666,992) Repayments on hybrid securities	Repayment of borrowings	(178,523)	(2,088,712)
Dividends paid Repayments on hybrid securities Interest payments on hybrid securities Interest payments on hybrid securities Settlement of derivative instruments Settlement of derivative instruments Net cash from (used in) financing activities Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations Effect of exchange rate on foreign operations financial statements translation Effect of exchange rate fluctuations on cash held Net increase (decrease) in cash and cash equivalents 10210,512 1032,370 1032,370 1033,709 1034,709 1035,371 1036,512 1036,51	Proceeds from debentures	916,913	1,196,761
Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Repayment of debentures	(895,700)	(656,200)
Repayments on hybrid securities - (100,000) Interest payments on hybrid securities - (4,050) Settlement of derivative instruments 676 (21,579) Net cash from (used in) financing activities 32,370 (43,709) Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations 32,371 (210,512) Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 - Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692	Dividends paid	(28,996)	(66,992)
Settlement of derivative instruments676(21,579)Net cash from (used in) financing activities32,370(43,709)Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations32,371(210,512)Effect of exchange rate on foreign operations financial statements translation(854)(764)Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692	Repayments on hybrid securities	-	(100,000)
Net cash from (used in) financing activities32,370(43,709)Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations32,371(210,512)Effect of exchange rate on foreign operations financial statements translation(854)(764)Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692	Interest payments on hybrid securities	-	(4,050)
Net increase (decrease) in cash and cash equivalents before effect of exchange rate fluctuations Effect of exchange rate on foreign operations financial statements translation Effect of exchange rate fluctuations on cash held Net increase (decrease) in cash and cash equivalents Cash and cash equivalents at beginning of the year 31,610 246,692	Settlement of derivative instruments	676	(21,579)
effect of exchange rate fluctuations32,371(210,512)Effect of exchange rate on foreign operations financial statements translation(854)(764)Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692	Net cash from (used in) financing activities	32,370	(43,709)
effect of exchange rate fluctuations32,371(210,512)Effect of exchange rate on foreign operations financial statements translation(854)(764)Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692			
Effect of exchange rate on foreign operations financial statements translation (854) (764) Effect of exchange rate fluctuations on cash held 93 Net increase (decrease) in cash and cash equivalents 31,610 (211,276) Cash and cash equivalents at beginning of the year 35,416 246,692			
statements translation(854)(764)Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692	-	32,371	(210,512)
Effect of exchange rate fluctuations on cash held93-Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692			
Net increase (decrease) in cash and cash equivalents31,610(211,276)Cash and cash equivalents at beginning of the year35,416246,692			(764)
Cash and cash equivalents at beginning of the year 35,416 246,692	<u> </u>		
Cash and cash equivalents at end of the year $\frac{4}{35,416}$	Cash and cash equivalents at beginning of the year		
	Cash and cash equivalents at end of the year \forall	₹ 67,026	35,416

For the years ended December 31, 2018 and 2017

1. Reporting Entity

In accordance with the restructuring plan dated January 21, 1999 for the electricity industry in the Republic of Korea, announced by the Ministry of Commerce, Industry and Energy and the Act on Promotion of Restructuring the Electric Power Industry published on December 23, 2000, Korea Western Power Co., Ltd. ("KOWEPO") was incorporated on April 2, 2001 through the spin-off of the power generation division of Korea Electric Power Corporation ("KEPCO"). KOWEPO and its subsidiaries ("the Group") engage in the generation of electricity and development of electric power resources.

As of December 31, 2018, KOWEPO owns and operates three power plants with a total annual capacity of 11,322MW.

KOWEPO's head office is located in Taean-gun, Chungcheongnam-do, Korea. The share capital of KOWEPO as of December 31, 2018 amounts to \(\psi\)166,646 million and KOWEPO's sole shareholder is KEPCO (100%).

In accordance with Korea International Financial Reporting Standards ("K-IFRS") 1110 'Consolidated Financial Statements', the Group's consolidated financial statements include the financial results of KOWEPO, the parent company and 7 other subsidiaries (the "Group") and 14 other investments which are accounted for as equity method investments.

2. Basis of Preparation

The consolidated financial statements have been prepared in accordance with Public Corporation and Quasi-governmental Institution Accounting Regulations and Standard. For those matters not specified in the regulations and standard above, the consolidated financial statements of the Group have been prepared in accordance with K-IFRS, a standard adopted in accordance with International Financial Reporting Standards by the Korean Accounting Standards Board.

The consolidated financial statements are scheduled to be approved by the board of directors on March 27, 2019, and will be finally approved at a shareholders' meeting on March 29, 2019.

(1) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the statement of financial position:

- ✓ Derivative financial instruments are measured at fair value
- ✓ Non-current financial assets at fair value through other comprehensive income are measured at fair value
- ✓ Liabilities for defined benefit plans are recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets

(2) Functional and presentation currency

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

For the years ended December 31, 2018 and 2017

2. Basis of Preparation, Continued

(3) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

a. Use of judgment by management

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following note.

✓ Note 14 : Scope of consolidation - whether the Group has de facto control over an investee

b. The uncertainty of assumptions and estimates

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next fiscal year are included in the following notes:

- ✓ Note 21, 37: Measurement of defined benefit obligations key actuarial assumptions
- ✓ Note 22 and 42: Recognition and measurement of provisions and contingencies key assumptions about the likelihood and magnitude of an outflow of resources
- ✓ Note 14, 39, 43: assets held for sale significant unobservable input

c. Measurement of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements, including Level 3 fair values, and reports directly to the CFO.

The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of K-IFRS, including the level in the fair value hierarchy in which such valuations should be classified.

When measuring the fair value of an asset or a liability, the Group uses market observable data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

- ✓ Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- ✓ Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- ✓ Level3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

For the years ended December 31, 2018 and 2017

2. Basis of Preparation, Continued

(3) Use of estimates and judgments, Continued

c. Measurement of fair values, Continued

If the inputs used to measure the fair value of an asset or a liability are categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. The Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following note:

✓ Note 37: Risk management

3. Changes in accounting policies

Except for the changes below, the Group has consistently applied the accounting policies to all periods presented in these financial statements. The Group has adopted the following new standards and amendments to standards, including any consequential amendments to other standards, with a date of initial application of January 1, 2018.

The main contents of the new policies and their impact on the Group's financial statements are as follows:

(1) K-IFRS 1115, 'Revenues from contracts with customers'

K-IFRS 1115 establishes a comprehensive framework for determining whether, how much and when revenue is recognized. It replaced K-IFRS 1018 'Revenue', K-IFRS 1011 'Construction Contracts', K-IFRS 2031 'Revenue: Barter Transactions Involving Advertising Service', K-IFRS 2113 'Customer Loyalty Programs', K-IFRS 2115 'Agreements for the Construction of Real Estate' and K-IFRS 2118 'Transfers of Assets from customers'.

Under K-IFRS 1115, revenue is recognised when the customer controls the goods or services. Control transfers over a point or period of time and requires judgment.

The cumulative effect of initial application was recognised by adjusting the opening balance of retained earnings for the fiscal year that includes the date of initial application for contracts not completed on the date of initial application (January 1, 2018) in accordance with the transitional provisions of K-IFRS 1115. However, the application of this Standard does not affect the financial position of January 1, 2018 and does not affect the introduction of K-IFRS 1115 as reflected in retained earnings on January 1, 2018. In addition, the effect of applying K-IFRS 1115 in the statement of comprehensive income (loss) ending at the same date as the Group's statement of financial position as of December 31, 2018 does not significantly affect the Group's consolidated financial statements.

For the years ended December 31, 2018 and 2017

3. Changes in accounting policies, Continued

(2) K- IFRS 1109, 'Financial Instruments'

K-IFRS 1109 'Financial Instruments' specifies requirements for the recognition and measurement of financial assets, financial liabilities and contracts for the sale of non-financial instruments. It replaced existing K-IFRS 1039 'Financial Instruments: Recognition and Measurement'.

The Group applied exceptions that do not require restatement of comparative information related to changes in accounting policies due to the adoption of K-IFRS 1109, 'Financial Instruments'. The Group applied the cumulative effect method, with the effect of initially applying K-IFRS 1109, recognized in retained earnings as of the date of initial application (January 1, 2018).

In addition, the Group applied K-IFRS 1109 to 2018 disclosures, but not to comparative information.

The following table summarizes the after-tax effect of the application of K-IFRS 1109 to the carrying amount of reserves, retained earnings and other components of equity.

In millions of won		January 1, 2018	
Retained earnings Other components of equity	₩		380 (380)

The nature and effect of major changes in accounting policies in accordance with K-IFRS 1109 are as follows.

For the years ended December 31, 2018 and 2017

3. Changes in accounting policies, Continued

(2) K- IFRS 1109, 'Financial Instruments', Continued

① Classification of financial assets and financial liabilities

In accordance with K-IFRS 1109, financial assets are measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) when initially applied. Classification of financial assets in accordance with K-IFRS 1109 is generally based on the business model in which assets are managed and their contractual cash flow characteristics. K-IFRS 1109 has eliminated the existing classification of held-to-maturity investments, loans and receivables and available-for-sale financial assets. Derivatives embedded in which the host contract is a financial asset covered by the scope of this standard are not separated but classified the hybrid financial instrument as a whole.

K-IFRS 1109 retained most of the existing requirements of K-IFRS 1039 for the classification and measurement of financial liabilities.

The adoption of K-IFRS 1109 does not have a significant impact on the Group's accounting policies related to financial liabilities and derivatives (including derivatives used as hedging instruments).

The following table describes each category of initial measurement categories in accordance with K-IFRS 1039 and new measurement categories of K-IFRS 1109 on January 1, 2018.

In millions of won	Classification based on K-IFRS 1039	Classification based on K-IFRS 1109	Amount based on K-IFRS 1039	Amount based on K-IFRS 1109
Current financial assets:				
Cash and cash equivalents	Loans and receivables	Amortized cost	₩ 35,416	35,416
Loans and receivables	Loans and receivables	Amortized cost	3,007	3,007
Short-term financial				
instruments	Loans and receivables	Amortized cost	50,000	50,000
Trade and other receivables	Loans and receivables	Amortized cost	653,556	653,556
			741,979	741,979
Non-current financial assets:				
Available-for-sale financial	Available-for-sale			
assets	financial assets	FVOCI	133,788	133,788
Loans and receivables	Loans and receivables	Amortized cost	14,984	14,984
Currency swap as a	Fair value-hedging	Fair value-hedging		
hedging instrument	instrument	instrument	3,988	3,988
Trade and other receivables	Loans and receivables	Amortized cost	63	63
			152,823	152,823
		<u>)</u>	₩ 894,802	894,802

On the other hand, on January 1, 2018, the effect of adjusting the carrying amount of a financial asset in accordance with K-IFRS 1039 to the carrying amount in accordance with K-IFRS 1109 is reclassification only and there is no remeasurement adjustment.

For the years ended December 31, 2018 and 2017

3. Changes in accounting policies, Continued

(2) K- IFRS 1109, 'Financial Instruments', Continued

2 Impairment of financial assets

K-IFRS 1109 replaces the "incurred loss" model of K-IFRS 1039 with the "expected credit loss" (ECL) model. The new impairment model is applied to financial assets measured at amortized cost, contract assets and financial liabilities at fair value through other comprehensive income (FVOCI), but not equity instrument investments. In accordance with K-IFRS 1109, credit losses will be recognized earlier than K-IFRS 1039.

The impairment loss on financial assets subject to the impairment model of K-IFRS 1109 is generally expected to increase and the volatility to increase. On January 1, 2018, the Group determined that there is no additional impairment loss required when K-IFRS 1109 is applied.

3 Hedge accounting

When initially applying K-IFRS 1109, the Group may elect as its accounting policy to continue to apply the hedge accounting requirements of K-IFRS 1039, *Financial Instruments: Recognition and Measurement.* The Group plans to elect to continue apply the hedge accounting requirements of K-IFRS 1039, *Financial Instruments: Recognition and Measurement.*

As of December 31, 2018, the Group has $\mbox{$W$36,488}$ million in assets and $\mbox{$W$5,284}$ million in liabilities that apply hedge accounting.

4 Transitional provisions

In principle, changes in accounting policies resulting from the adoption of K-IFRS 1109 shall be applied retrospectively, except as described below.

The Group applied the exemption which allows the Group not to restate the comparative information in relation to the changes in classification and measurement including impairment.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies

The significant accounting policies applied by the Group in preparation of its consolidated financial statements are included below. The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements, except those as described in Note 3.

(1) Consolidation

(i) Business combinations

Business combinations are accounted for by applying the acquisition method, except for combinations of business entities or businesses that are under common control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities. The costs to issue debt or equity securities are recognized in accordance with K-IFRS 1032, *Financial Instruments: Presentation* and K-IFRS 1039, *Financial Instruments: Recognition and Measurement*.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

(ii) Non-controlling interests

NCI are measured at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(1) Consolidation, Continued

(iii) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

(iv) Loss of control

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

(v) Interests in equity-accounted investees

The Group's interests in equity-accounted investees comprise interests in associates and joint ventures.

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and joint ventures are accounted for using the equity method. They are recognized initially at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and OCI of equity-accounted investees, until the date on which significant influence or joint control ceases.

(vi) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

(vii) Business combination under common control

For business combinations arising from transfers of interests in the entities that are under common control, the assets and liabilities acquired are recognized at the carrying amounts recognized previously in the Group controlling shareholder's consolidated financial statements. The components of equity of the acquired entities are presented in the same components within the Group's equity except that any share capital of the acquired entities is recognized as part of share premium.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(2) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

(3) Inventories

The cost of inventories is based on the moving average principle, and includes expenditures for acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Inventories are measured at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, are recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

(4) Non-derivative financial assets

① Recognition and initial measurement

Trade receivable and issued debt securities are initially recognized at the time of issue. Other financial assets or financial liabilities are recognized at the time of the Group became a contracting party.

Except for trade receivable that not including significant financial elements, financial assets or financial liabilities are measured at fair value at the time of first recognition. Financial assets in case of not financial asset or financial liability at fair value through profit or loss, the transaction costs directly related to the issue are add or subtract to fair value. Trade receivable that not including significant financial elements is measured at transaction price.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(4) Non-derivative financial assets, Continued

② Classification and subsequent measurement (effective from January 1, 2018)

Financial assets are measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) when initially applied.

Financial assets are does not reclassified unless change a business model. If the group change a business model, all financial assets are reclassified at the time of first reporting period.

Financial assets are measured at amortized cost when they aren't measured at fair value through profit or loss (FVTPL) and they meet both of the following conditions:

- It holds financial assets under a business model that is intended to receive contractual cash flows.
- Under the terms of the contract, there is a cash flow consisting solely payments of principal and interest on the principal amount outstanding on a particular day.

Financial liabilities are measured at fair value through other comprehensive income (FVOCI) when they aren't measured at fair value through profit or loss (FVTPL) and they meet both of the following conditions:

- It holds financial assets under a business model that is achieved through both receipt of contractual cash flows and sale of financial assets.
- Under the terms of the contract, there is a cash flow consisting solely payments of principal and interest on the principal amount outstanding on a particular day.

At the date of initial recognition of an equity instrument that is not a trading instrument, the Group may make an irrevocable choice to subsequent changes in the fair value of that investment in other comprehensive income. This choice is made by each financial instruments.

As described above, amortized cost and all of the financial instruments not measured at fair value through other comprehensive income (FVOCI) including all derivatives, are measured at fair value through profit or loss (FVTPL). The Group measure a financial asset meet the measurement requirements at amortized cost or fair value through other comprehensive income (FVOCI) initially at fair value through profit or loss (FVTPL), if the accounting mismatch is eliminated or significantly reduced. However, such choice could be irrevocable.

The group evaluate purpose of business model at the portfolio level of financial assets. And the group consider the following information.

- Stated accounting policies and objective about portfolio, management of policy. This include acquisition of interest income, interest rate level, duration of debt, and accordance of duration of financial assets and financial liabilities. And expected cash flow outflow, realization of board of director's strategies.
- Evaluation of performance of financial assets, how to report evaluation contents.
- Compensation to management (e.g. based on the fair value of the assets being managed or on the basis of the contractual cash flows being received)
- Expectation of frequency to selling financial assets in the past, amount, time, reason, future selling activities. For this purpose, transfers of financial assets to third parties in transactions that do not meet the derecognizing requirements are not considered for sale.

A portfolio of financial assets that meets the definition of trading or whose performance is valued at fair value through profit or loss is measured at fair value through profit or loss.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(4) Non-derivative financial assets, Continued

Financial assets: An assessment of whether contractual cash flows are solely principal and interest

The principal is defined as the fair value at the initial recognition of the financial assets. Interest is comprised in time value of money, value for the credit risk associated with principal and another cost of basic rental risk and margin.

When assessing whether contractual cash flows consist solely of payments for principal and interest, the group take into account conditions of contract. If the financial assets includes contractual terms that change the timing or amount of cash flows in the contract, it is necessary to determine whether the cash flows that may occur during the period of the financial assets consist solely of principal payments.

The Group consider the followings:

- Conditions that change the amount or timing of cash flows
- Provision to adjust contractual nominal interest rate, including variable interest rate characteristics
- Characteristics of repayment and maturity extension.
- Terms that limit the Group's claim to cash flows arising from a particular asset

The amount of the interim repayment represents the interest on the principal and remnant money, and if it includes reasonable additional compensation for the early liquidation of the contract, early repayment characteristics are consistent with the conditions under which principal and interest that paid on a particular day.

Also about financial assets that acquired significantly discounted or additional premium, amount of interim repayments is substantially consisted of principal and interest, and this characteristics fair value at initial recognition is minor, the Group determined that these conditions are satisfied.

For the years ended December 31, 2018 and 2017

4. **Significant Accounting Policies, Continued**

(4) Non-derivative financial assets, Continued

through profit or loss (FVTPL)

Financial assets at fair value These assets are subsequently measured at fair value. Net gain or loss, including interest and dividend income, is recognized in profit or loss. Please refer to Note 4. (5) for derivatives designated as hedging instruments.

Financial assets at amortized cost

These assets are subsequently measured at amortized cost using the effective interest method. Amortization is reduced by Impairment loss. Interest income, foreign currency translation gains and losses and Impairment are recognized in profit or loss. The gain or loss on disposal is also recognized in profit or loss.

Financial liabilities at fair value through other comprehensive income (FVOCI)

These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign currency translation gains and losses are recognized in profit or loss. Other profit or loss is recognized in other comprehensive income. The gain or loss accumulated in other comprehensive income is reclassified to profit or loss as disposal.

Equity instruments at fair value through other comprehensive income (FVOCI)

These assets are subsequently measured at fair value. Dividends are recognized in profit or loss if the dividends do not clearly represent collection of investment costs. Other profit or loss is recognized in other comprehensive income and is never reclassified to profit or loss.

③ Derecognition of financial assets.

The Group derecognizes non-derivative financial assets when the contractual rights to the cash flows from the financial asset expire, or the Group transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in a transferred financial asset that is created or retained by the Group is recognized as a separate asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

4 Offsetting a financial asset and a financial liability

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(5) Derivative financial instruments, including hedge accounting

The Group holds derivative financial instruments to hedge foreign exchange and interest rate exposures. An embedded derivative, if a host contract is not a financial asset and meets specified conditions, is accounted for separately from the host.

Derivatives are measured at fair value at initial recognition. It is measured at fair value after initial recognition and the change is generally recognised as a profit or loss.

The Group designates specific derivatives as hedging instruments to hedge the variability of cash flows associated with highly probable future forecast transactions arising from changes in exchange rates and interest rates.

At the inception of the hedge, the Group documents the purpose and strategy of risk management to perform the hedge. The Group documents the economic relationship between the hedged item and the hedging instrument, including whether changes in the cash flows of the hedged item and the hedging instrument are expected to be offset by each other.

Cash flow hedge

When derivatives are designated as cash flow hedging instruments, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in the hedging reserve in equity. The effective portion of changes in the fair value of the derivatives which recognized in other comprehensive income is limited to cumulated changes in fair value of hedged item from inception of the hedge determined based on the present value. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

The Group designates only changes in the fair value of the spot element of future exchange transactions as a hedging instrument in cash flow hedge relationship. The change in the fair value of the forward element ('forward point') of future exchange transaction is accounted for separately as cost of hedging and recognized in cost of hedging of equity.

If a hedged forecast transaction subsequently results in the recognition of a non-financial asset such as inventories, the Group removes that amount from the cash flow hedge reserve and includes it directly in the initial cost of the assets upon the recognition.

For other forecast transaction, the cumulated cash flow hedge reserves and costs of hedging are reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged expected future cash flows affect profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively.

If the hedging transaction is a transaction which recognizes non-financial items, in case the hedging accounting is discontinued, cumulated hedging reserves and cost of hedging are left in equity items until that amount is included in the cost of non-financial items when they are initially recognized. For other cash flow hedging transaction not covered in this case, cash flow hedge reserves and cost of hedging are reclassified to profit or loss as a reclassification adjustment in the periods during which the hedged expected future cash flows affect profit or loss.

If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(6) Impairment of financial assets

① Financial assets and contract assets

The Group recognizes loss allowance for expected credit losses on the following assets.

- Amortized cost of a financial asset

The Group measures loss allowance for expected credit losses, except for the following financial assets measured at the expected credit loss of 12 months.

- Debt securities whose credit is determined to be at low risk at the end of the reporting period
- Other debt securities and bank deposits that do not have a significant increase in credit risk (i.e. default risk arising over the expected life of the financial asset)

The Group has chosen to measure the loss allowance at an amount equal to lifetime expected credit losses for the trade receivables, contract assets and lease receivables that contain a significant financing component.

When determining whether the credit risk of a financial asset has significantly increased since the initial recognition and when estimating expected credit losses, the Group considers information that can be used and reasonably supported, without undue cost or effort.

The Group considers a default on the financial asset if:

- If the debtor does not engage in any activity with the Group and is not likely to fully fulfill the credit obligations to the Group

Overall period expected credit losses are expected credit losses resulting from all default events that may occur during the expected life of the financial instrument.

12-month expected credit losses are part of lifetime expected credit losses that represent expected credit losses from a default event on a financial instrument within 12 months of the reporting period's end (or for a shorter period of time if the expected life of the instrument is less than 12 months).

The longest period to consider when measuring expected credit losses is the longest term for which the Group is exposed to credit risk.

② Measurement of expected credit loss

Expected credit loss is a probability weighted estimate of credit loss. Credit loss is measured as the present value of all cash deficiency (i.e. the difference between all contract cash flows that are expected to be paid and all contract cash flows that are expected to be received). Expected credit losses are discounted at the effective interest rate of the financial asset.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(6) Impairment of financial assets, Continued

③ Credit-impaired financial assets

At the end of each reporting period, the Group assesses the financial assets measured at amortized cost and other comprehensive income - whether the creditworthiness of the debt securities measured at fair value has been impaired. If there is more than one event that adversely affects the estimated future cash flows of a financial asset, the financial asset is impaired.

The evidence that the credit of a financial asset is impaired includes the following observable information:

- Significant financial difficulties of issuer or borrower
- Breach of contract, such as default or delinquency
- Inevitable mitigation of initial borrowing conditions for economic or contractual reasons related to the borrower's financial difficulties
- Possibility of bankruptcy of borrowers or other possibility of financial restructuring
- Due to financial difficulties, the active market for the financial assets is extinguished

4 Presentation of provision for credit loss on statement of financial position

The allowance for losses on financial assets measured at amortized cost is deducted from the carrying amount of the asset.

For debt measured at fair value through other comprehensive income, the allowance for losses is recognized in other comprehensive income instead of reducing the carrying amount of the asset.

⑤ Write-off

If an entity does not reasonably expect to recover all or part of the contractual cash flows of a financial asset, the asset is derecognised. For individual customers, on the basis of their past experience with the recovery of similar assets, the Group removes the carrying amount if the financial asset is determined to be impaired, evaluates whether there is a reasonable expectation for the recovery of the entity's customers, and evaluates the timing and amount separately. The Group has no expectation that the proceeds will be recovered significantly. However, any financial assets that are derecognised may be subject to recovery activities in accordance with the Group's procedures for recovering the amount due.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(7) Property, plant and equipment

Property, plant and equipment are initially measured at cost and after initial recognition, are carried at cost less accumulated depreciation and accumulated impairment losses. 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 and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed. A component that is significant compared to the total cost of property, plant and equipment is depreciated over its separate useful life.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized in profit or loss.

The estimated useful lives of the Group's assets are as follows:

	Useful lives (years)	
Buildings	8 ~ 30	
Structures	8 ~ 30	
Machinery	6 ~ 24	
Vehicles	4	
Finance lease	6~ 30	
Other property, plant and equipment ("the other PP&E")	4	

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(8) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

	Useful lives (years)
Computer software	5
Development costs	5
Leasehold rights	10~20
Others	5~10

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

(i) Research and development

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

(ii) Subsequent expenditures

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(9) Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. The Group immediately recognizes other borrowing costs as an expense. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group shall determine the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate shall be the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period shall not exceed the amount of borrowing costs incurred during that period.

(10) Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

Government grants whose primary condition is that the Group purchase, construct or otherwise acquire long-term assets are deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the life of a depreciable asset as a reduction to depreciation expense.

Government grants which are intended to compensate the Group for expenses incurred shall be recognized as other income in profit or loss over the periods in which the Group recognizes the related costs as expenses.

(11) Impairment of non-financial assets

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

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(11) Impairment of non-financial assets, Continued

The Group estimates the recoverable amount of an individual asset, if it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflect current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(12) Leases

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

(i) Finance leases

At the commencement of the lease term, the Group recognizes as finance assets and finance liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews to determine whether the leased asset may be impaired.

(ii) Operating leases

Leases where the lessor retains a significant portion of the risks and rewards of ownership are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the period of the lease.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(12) Leases, Continued

(iii) Determining whether an arrangement contains a lease

Determining whether an arrangement is, or contains, a lease shall be based on the substance of the arrangement and requires an assessment of whether fulfillment of the arrangement is dependent on the use of a specific asset or assets (the asset) and the arrangement conveys a right to use the asset.

At inception or reassessment of the arrangement, the Group separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a financial lease that it is impracticable to separate the payments reliably, the Group recognizes an asset and a liability at an amount equal to the fair value of the underlying asset that was identified as the subject of the lease. Subsequently, the liability shall be reduced as payments are made and an imputed finance charge on the liability recognized using the purchaser's incremental borrowing rate of interest.

(13) Non-current assets held for sale

Non-current assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as non-current assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

A non-current asset that is classified as held for sale or part of a disposal group classified as held for sale is not depreciated (or amortized).

(14) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

(i) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the acquisition are recognized in profit or loss as incurred.

(ii) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(14) Non-derivative financial liabilities, Continued

(iii) Elimination of financial liabilities

The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires). If the contractual terms of the financial liability have changed and the cash flows have changed substantially, the Group will derecognise the existing liability and recognise the new financial liability at fair value on the basis of the new contract.

On derecognition of a financial liability, the difference between the carrying amount and the consideration paid (including transferred non-cash assets or liabilities assumed) is recognised in profit or loss.

(15) Employee benefits

(i) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

(ii) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the period in which the employees render the related service, and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods, less the fair value of any related assets. Remeasurements are recognized in profit or loss in the period in which they arise.

(iii) Retirement benefits: defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method.

The discount rate is the yield at the reporting date on corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes all actuarial gains and losses arising from actuarial assumption changes and experiential adjustments in other comprehensive income when incurred.

When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Group recognizes an asset, to the extent of the total of cumulative unrecognized past service cost and the present value of any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

Past service costs which are the change in the present value of the defined benefits obligation for employee service in prior periods, resulting in the current period from the introduction of, or change to post-employment benefits, is recognized as an expense on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits are already vested immediately following the introduction of, or changes to, a defined benefit plan, the Group recognizes the past service cost immediately.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(16) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation 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.

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 some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement shall be recognized when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement shall be treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

(17) Foreign currencies

(i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency using the reporting date's exchange rate. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

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

(ii) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

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

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(17) Foreign currencies, Continued

(ii) Foreign operations, Continued

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

(iii) Translation of net investments on foreign operations

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

(18) Equity capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares and share options are recognized as a deduction from equity, net of any tax effects.

Preferred shares are classified as equity if they are not required to be redeemed or redeemed only at the Group's decision and the payment of dividends is determined on the discretion of the Group. Dividend is recognized when it is approved at the shareholders' meeting. Preferred shares that are eligible for collection of determined or determinable amount on or after a specified date or preferred shares to be mandatorily redeemed are classified as liabilities. Related dividends are recognized in profit or loss at the point in time of occurrence as interest expenses.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(19) Revenue from contracts with customers

The Group has initially applied K-IFRS 1115 'Revenue from Contracts with Customers' from January 1, 2018, and the effects of initial application of K-IFRS 1115 are described in Note 3.

The Group recognizes revenue by applying the five-step approach. (Step 1: Identify the contract(s) with a customer, Step 2: Identify the performance obligations in the contract, Step 3: Determine the transaction price, Step 4: Allocate the transaction price to the performance obligations in the contract, and Step 5: Recognize revenue when the entity satisfied a performance obligation)

① Identification of performance obligations in the contract

The Group to develops and operates electric power resources, power generation, transmission, conversion, distribution, and related operations.

On the other hand, the power supply is identified as a single performance obligation as a series of distinct goods or services. In addition to the power supply, the Group also performs power generation by-products, EPC businesses, and O&M through contracts with customers, and identify performance obligations that are distinct from each contract. The separation of performance obligations has no significant impact on the Group's revenue.

2 Variable consideration

The Group is conducting progressive pricing of electricity rates and discounting of electricity rates for policy purposes, which may change the price received from customers. The Group estimate the variable consideration using an expected value method that we expect to better predict the consideration to be entitled to, and recognise revenue by including variable consideration in the transaction price only to those amounts that are highly probable of not reversing a significant portion of the cumulative revenue recognised when the uncertainty associated with the variable consideration is resolved. Variable consideration has no significant impact on Group's revenue.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(19) Revenue from contracts with customers, Continued

③ Performance obligations satisfied over time

The Group provides customers with services such as EPC business and O&M over time. The Group recognises revenue based on the progress made on a reasonable basis.

The Group may recognized revenue on a percentage-of-completion basis when the Group meets one of following criteria:

- the customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity performs
- the entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
- the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date.

The impact of recognition of revenue over time on progress on a percentage-of-completion basis on the Group's profit or loss is not significant.

① Transaction price is allocated to performance obligations

The Group allocates the transaction price to a number of performance obligations identified in a single contract on a relative stand-alone selling price basis, and this allocation has no significant impact on Group's revenue.

⑤ Revenue recognition when performance obligations are satisfied

The Group recognises revenue when the Group satisfies the performance obligation by transferring the promised goods and services to the customer. This recognition timing has no significant impact on the Group's revenue.

(20) Finance income and finance costs

The Group's financial revenue and financial expenses consist of:

- Interest income
- Interest cost
- Dividend earnings
- Net gain or loss on financial assets measured at fair value through profit or loss
- Foreign exchange gains and losses on financial assets and financial liabilities
- Impairment losses (or reversals of impairment losses) arising from investments in debt instruments measured at amortised cost or fair value through other comprehensive income
- Hedge ineffectiveness recognised in profit or loss
- Reclassified net gain or loss previously recognized in other comprehensive income under cash-flow hedging accounting for interest risk and foreign exchange risk on borrowings

Interest income or interest expense was recognised using the effective interest method. Dividend incomes are recognised when the Group is entitled to the dividend.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(20) Finance income and finance costs, Continued

The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to the gross carrying amount of the financial asset or the amortized cost of the financial liability.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

(21) Income taxes

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(i) Current tax

Current tax is the expected tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit.

Current tax asset and current tax liability are offset only when the following conditions are met:

- The Group legally holds an enforceable right to offset the recognized amount, and
- Has an intention to settle in a net amount or settle the liability while realizing the asset.

(ii) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. A deferred tax liability is recognized for all taxable temporary differences. A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which they can be utilized. However, deferred tax is not recognized for the following temporary differences: taxable temporary differences arising on the initial recognition of goodwill, or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit or loss nor taxable income.

When future taxable income that tax deficit, tax deduction, and deductible temporary differences can be used is probable, within this scope, deferred tax assets are recognized for unused tax deficit and tax credit carry-forwards, and deductible temporary differences. The future taxable income is determined by the reversal of the temporary difference to be added. If the temporary difference to be added is not sufficient to fully recognize the deferred tax asset, the reversal of current temporary differences and the business plan of the subsidiaries of the Group are considered.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(21) Income taxes, Continued

The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets or deferred tax liabilities on investment properties measured at fair value, unless any contrary evidence exists, are measured using the assumption that the carrying amount of the property will be recovered entirely through sale.

The Group recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes a deferred tax asset for all deductible temporary differences arising from investments in subsidiaries and associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(22) Earnings per share

KOWEPO presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of KOWEPO by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares.

(23) Greenhouse gas emission rights and obligations

With Enforcement of Allocation and Trading of Greenhouse Gas Emissions Allowances, the Group applies the following accounting policies for emissions rights and obligations.

(i) Emissions rights

Greenhouse gas emissions rights consist of the allowances received free of charge from the government and the ones purchased. The cost of the emissions rights includes expenditures arising directly from the acquisition and any other costs incurred during normal course of the acquisition.

Emissions rights are held by the Group to fulfill the legal obligation and recorded as intangible assets. To the extent that the portion to be submitted to the government within one year from the end of reporting period, the emissions rights are classified as current assets. Emissions rights recorded as intangible assets are initially measured at cost and substantially remeasured at cost less accumulated impairment losses.

Greenhouse gas emission rights are derecognized on submission to the government or when no future economic benefits are expected from its use or disposal.

(ii) Emissions obligations

Emissions obligations are the Group's present legal obligation to submit the emissions allowances to the government and recognized when an outflow of resources is probable and a reliable estimate can be made of the amount of the obligation. Emissions obligations are measured as the sum of the carrying amount of the allocated rights that will be submitted to the government and the best estimate of expenditure required to settle the obligation at the end of the reporting period for any excess emission.

For the years ended December 31, 2018 and 2017

4. Significant Accounting Policies, Continued

(24) New standards and interpretations not yet adopted

The following are the major amendments and interpretations that have been enacted and publicly issued but do not have an effective date in the fiscal year beginning after January 1, 2018. The Group did not early apply the amended or amended standards and interpretations in the preparation of the accompanying financial statements.

1) K-IFRS 1116 'Lease'

K-IFRS 1116 replaces K-IFRS 1017 'Lease', K-IFRS 2104 'Determining whether an Arrangement contains a Lease', K-IFRS 2015 'Operating Lease: Incentive' and K-IFRS 2027 'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'. It is effective for annual periods beginning on or after January 1, 2019.

K-IFRS 1116 provides a single lessee accounting model in which the lessee recognizes lease related assets and liabilities in the statement of financial position. A lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. Lease recognition may be exempted for short-term leases and leases for which the underlying asset is of low value. Accounting for a lessor is similar to the existing standard that classifies each of its leases as either an operating lease or a finance lease.

The Group has not yet completed the assessment of the potential impact on the financial statements. The actual impact on the financial statement on the adoption of K-IFRS 1116 is determined based on the future economic environment including the Group's borrowing rate and lease portfolio as at January 1, 2019, whether the Group will exercise option of renewing lease, and application of practical expedient and exemptions.

Upon adoption of K-IFRS 1116, the nature of the costs associated with the lease will change as the operating lease payments recognized based on a straight-line basis will change to depreciation expense of a right-of-use asset and interest expense of the lease liability and no significant impact is expected on the Group's finance lease.

The Group plans to complete the detailed assessment of the potential impact from the application of K-IFRS 1116 during the year ending December 31, 2019.

For the years ended December 31, 2018 and 2017

5. Operating Segment

(1) Substantially all of the Group's revenue and non-current assets are generated and located in Korea. The Group's chief operating decision maker ("CODM") does not receive and therefore does not review discrete financial information for any component of the Group.

(2) Information about major customer

Sales attributable to KEPCO, the major customer, are \(\psi_4,792,853\) million and \(\psi_4,265,124\) million for the years ended December 31, 2018 and 2017, respectively.

6. Categories of Financial Instruments

(1) Financial assets

Categories of financial assets as of December 31, 2018 and 2017 are as follows:

(i) As of December 31, 2018

In millions of won		FVTPL	Amortization cost	FVOCI - equity investment	Fair value -hedging instrument	Total
Current financial assets:						
Cash and cash equivalents	₩	-	67,026	-	-	67,026
Current financial assets						
Loans and receivables		-	3,974	-	-	3,974
Short-term financial		-	50,000	=	-	50,000
Derivative assets		24	-	-	18,212	18,236
Trade and other receivables, net			593,436			593,436
		24	714,436		18,212	732,672
Non-current financial assets: Non-current financial assets						
Available-for-sale financial		_	_	225,332	-	225,332
Loans and receivables		_	14,854	-	-	14,854
Non-current derivative assets		-	-	-	18,275	18,275
Non-current trade and other					•	•
receivables, net		-	2,404			2,404
		-	17,258	225,332	18,275	260,865
	₩	24	731,694	225,332	36,487	993,537

For the years ended December 31, 2018 and 2017

6. Categories of Financial Instruments, Continued

- (1) Financial assets, Continued
- (ii) As of December 31, 2017

In millions of won	_	Loans and receivables	Available-for- sale financial assets	Derivatives using hedge accounting	Total
Current financial assets: Cash and cash equivalents Current financial assets	₩	35,416 3,007	-	-	35,416 3,007
Loans and receivables Short-term financial instruments Trade and other		50,000	-	-	50,000
receivables, net	<u>-</u>	653,556 741,979			653,556 741,979
Non-current financial assets: Non-current financial Available-for-sale financial					
assets Loans and receivables Derivative assets Non-current trade and		- 14,984 -	133,788 - -	- - 3,988	133,788 14,984 3,988
other receivables, net	₩	63 15,047 757,026	133,788 133,788	3,988 3,988	63 152,823 894,802

For the years ended December 31, 2018 and 2017

6. Categories of Financial Instruments, Continued

(2) Financial liabilities

Categories of financial liabilities as of December 31, 2018 and 2017 are as follows:

(i) As of December 31, 2018

In millions of won	_	FVTPL	Amortized cost	Fair value – hedging instrument	Total
Current financial liabilities:					
Trade and other payables Current financial liabilities	₩	-	422,654	-	422,654
Borrowings		-	40,348	-	40,348
Debentures		-	722,120	-	722,120
Derivative liabilities		213		5,284	5,497
	_	213	1,185,122	5,284	1,190,619
Non-current financial liabilities: Non-current financial liabilities					
Borrowings		_	1,200	_	1,200
Debentures		<u>-</u>	4,336,123	<u> </u>	4,336,123
	_		4,337,323		4,337,323
	₩_	213	5,522,445	5,284	5,527,942

(ii) As of December 31, 2017

In millions of won		Financial liabilities at fair value through profit	Financial liabilities measured at amortized cost	Derivatives using hedge accounting	Total
Current financial liabilities:					
Trade and other payables Current financial liabilities	₩	-	246,530	-	246,530
Borrowings		_	348	_	348
Debentures		-	894,951	-	894,951
Derivative liabilities		866	<u> </u>	5,865	6,731
		866	1,141,829	5,865	1,148,560
Non-current financial liabilities:					
Non-current trade and other Non-current financial liabilities		-	2,189	-	2,189
Borrowings		_	1,548	-	1,548
Debentures		-	4,101,895	-	4,101,895
Derivative liabilities				16,116	16,116
			4,105,632	16,116	4,121,748
	₩	866	5,247,461	21,981	5,270,308

For the years ended December 31, 2018 and 2017

6. Categories of Financial Instruments, Continued

(3) Finance income and expenses

Finance income and expenses on each category of financial instruments for the years ended December 31, 2018 and 2017 are as follows:

Type	Description	2018	2017
Financial assets at fair	Gain (loss) on valuation of derivative instruments, net	24	-
value through profit or loss	Gain (loss) on transactions of derivative instruments, net	8,300	-
Financial assets at	Interest income	6,108	-
amortized cost	Gain (loss) on foreign currency transactions and translations, net	108	-
	Amortization of present value discount	388	-
Financial assets at fair value through other	Gain (loss) on valuation of derivative instruments, net (equity, before tax)	91,877	-
comprehensive income	Dividend income	6,510	-
Fair value hedge derivative assets	Gain (loss) on change in the unrealized fair value of derivative instruments, net	36,860	-
	Gain (loss) on transactions of derivative instruments, net	33,274	-
Cash and cash	Interest income	-	1,651
equivalents	Gain (loss) on foreign currency transactions and translations, net	-	7
Available-for-sale financial assets	Gain (loss) on valuation of available-for-sale financial assets, net (equity, before tax)	-	39,210
Loans and receivables	Interest income	-	33
	Amortization of present value discount	-	402
Financial liabilities at	Gain (loss) on valuation of derivative instruments, net	(213)	-
fair value through profit or loss	Gain (loss) on transactions of derivative instruments, net	(2,169)	-
Fair value hedge derivative liability	Gain (loss) on valuation of derivative instruments, net (equity, before tax)	11,236	-
	Gain (loss) on transactions of derivative instruments, net	(6,601)	-
Financial liabilities	Gain (loss) on foreign currency transactions and translations, net	(67,023)	166,589
recorded at	Interest expense of borrowings and debentures	(138,488)	(122,207)
amortized cost	Other interest expense	(662)	(152)
Derivatives (trading)	Gain (loss) on valuation of derivative instruments, net	-	(866)
	Gain (loss) on transactions of derivative instruments, net	-	(11,169)
Derivatives (hedge accounting)	Gain (loss) on valuation of derivative instruments, net (profit or loss)	-	(127,002)
	Gain (loss) on valuation of derivative instruments, net (equity, before tax)	-	(1,995)
	Gain (loss) on transactions of derivative instruments, net	-	(46, 109)

For the years ended December 31, 2018 and 2017

7. Cash and Cash Equivalents

Cash and cash equivalents as of December 31, 2018 and 2017 are as follows:

In millions of won	2018	2017
Cash W	1	1
Other demand deposits	31,716	9,855
Short-term investments classified as cash		
equivalents	35,309	25,560
₩	67,026	35,416

^(*) There are no financial instruments restricted in use as of December 31, 2018 and 2017.

8. Trade and Other Receivables

- (1) Trade and other receivables as of December 31, 2018 and 2017 are as follows:
- (i) As of December 31, 2018

In millions of won	Gross receivables		Present value discount	Book value	
Current assets:					
Trade receivables	₩	393,030	-	393,030	
Other receivables		200,525	(119)	200,406	
		593,555	(119)	593,436	
Non-current assets:	_				
Other receivables		2,578	(174)	2,404	
	₩	596,133	(293)	595,840	

^(*) There are no trade and other receivables which are overdue or impaired as of December 31, 2018.

(ii) As of December 31, 2017

In millions of won	Gross receivables	Present value discount	Book value	
Current assets:				
Trade receivables 4	V 388,464	-	388,464	
Other receivables	265,234	(142)	265,092	
	653,698	(142)	653,556	
Non-current assets:				
Other receivables	219	(156)	63	
†	₩ 653,917	(298)	653,619	

For the years ended December 31, 2018 and 2017

8. Trade and Other Receivables, Continued

(2) Details of other receivables as of December 31, 2018 and 2017 are as follows:

(i) As of December 31, 2018

In millions of won		0 1.11	Present value		
		Gross receivables	discount	Book value	
Current assets:					
Non-trade receivables	₩	6,432	-	6,432	
Accrued income		189,370	-	189,370	
Guarantee		4,702	(119)	4,583	
Others		21	-	21	
		200,525	(119)	200,406	
Non-current assets:					
Guarantee		85	-	85	
Non-trade receivables		2,493	(174)	2,319	
		2,578	(174)	2,404	
	₩	203,103	(293)	202,810	

(ii) As of December 31, 2017

In millions of won		Gross receivables	Present value discount	Book value	
		G1033 1000140D103		BOOK VAIAC	
Current assets:					
Non-trade receivables	₩	16,863	-	16,863	
Accrued income		242,150	-	242,150	
Guarantee		6,221	(142)	6,079	
		265,234	(142)	265,092	
Non-current assets:					
Guarantee		219	(156)	63	
	₩	265,453	(298)	265,155	

For the years ended December 31, 2018 and 2017

9. Financial Assets at Fair Value Through Other Comprehensive Income

(1) Financial assets at fair value through other comprehensive income as of December 31, 2018 and 2017 are as follows:

In millions of won		_	2018	2018	2017
	Ownership	<u> </u>	Acquisition cost	Book value	Book value
Equity securities listed :					
PT Bayan Resources TBK	4.00%	₩	80,533	203,520	-
Equity securities unlisted :					
Korea Power Exchange	7.14%		9,131	15,863	-
KEPCO UHDE	2.40%		516	14	-
HeeMang Sunlight Power Co., Ltd.	8.33%		393	393	-
3i Powergen Inc.	15.00%		1,482	-	-
KEPCO Bylong Australia Pty., Ltd.	2.00%		6,135	5,542	-
		₩	98,190	225,332	

(2) Changes in financial assets at fair value through other comprehensive income during the year ended December 31, 2018 are as follows:

In millions of won	_	Beginning balance	Valuation	Others	Ending balance
Equity securities listed	₩	111,653	91,867	-	203,520
Equity securities unlisted		22,135	11	(334)	21,812
	₩	133,788	91,878	(334)	225,332

For the years ended December 31, 2018 and 2017

10. Available-for-sale Financial Assets

(1) Available-for-sale financial assets as of December 31, 2018 and 2017 are as follows:

In millions of won		_	2018	2018	2017
	Ownershi	<u>р</u>	Acquisition cost	Book value	Book value
Equity securities listed :					
PT Bayan Resources TBK	4.00%	₩	80,533	-	111,653
Equity securities unlisted :					
Korea Power Exchange	7.14%		9,131	-	15,853
KEPCO UHDE	2.40%		516	-	14
HeeMang Sunlight Power Co., Ltd.	8.33%		393	-	393
3i Powergen Inc.	15.00%		1,482	-	-
KEPCO Bylong Australia Pty., Ltd.	2.00%		6,135	-	5,875
		₩	98,190		133,788

(2) Changes in available-for-sale financial assets during the year ended December 31, 2017 are as follows:

In millions of won	_	Beginning balance	Valuation	Others	Ending balance
Equity securities listed Equity securities unlisted	₩	71,840 22,997	39,813 (603)	- (259)	111,653 22,135
Equity 300diffilos diffiscod	₩	94,837	39,210	(259)	133,788

For the years ended December 31, 2018 and 2017

11. Derivatives

(1) Derivatives as of December 31, 2018 and 2017 are as follows:

In millions of won		2	018	2017		
	_	Current	Non-current	Current	Non-current	
Derivative assets:						
Currency forward	₩	24	-	-	-	
Currency swap		18,212	18,275	-	3,988	
	₩	18,236	18,275		3,988	
Derivative liabilities:	=					
Currency forward	₩	213	=	866	-	
Currency swap		5,284	=	5,865	16,116	
	₩	5,497		6,731	16,116	

(2) Currency swap contracts as of December 31, 2018 are as follows:

In millions of won, and thousands of USD and CHF

					Contract	t interest	Contract
			Contra	ct amounts	ra	ite	exchange
			Pay		Pay	Receive	rate
Туре	Counterparty	Period	(KRW)	Receive	(%)	(%)	(in won)
Cash flow	Credit Agricole	2013~2019	118,343	CHF 100,000	3.470	1.625	1,183.43
hedge	Morgan Stanley	2013~2019	59,172	CHF 50,000	3.403	1.625	1,183.43
	Nomura	2013~2019	59,172	CHF 50,000	3.470	1.625	1,183.43
	Standard Charterd	2014~2019	104,490	USD 100,000	2.770	2.625	1,044.90
	Credit Agricole	2014~2019	104,490	USD 100,000	2.770	2.625	1,044.90
	Morgan Stanley	2014~2019	104,490	USD 100,000	2.703	2.625	1,044.90
	KDB Bank	2018~2023	320,880	USD 300,000	2.028	3.750	1,069.60

For the years ended December 31, 2018 and 2017

11. Derivatives, Continued

(3) Currency forward contracts as of December 31, 2018 are as follows:

In millions of won and thousands of USD

III ITIIIIIOIIS OI WOIT ATIU LIIOUSATIUS OI OSD			Contra			
Туре	Counterparty	Contract Date	Maturity Date	Receive	Purchase	Contract exchange rate (in won)
Trading	Societe Generale	2018.12.19	2019.01.21	KRW 7,853	USD 7,000	1,121.85
purpose	Societe Generale	2018.12.21	2019.01.28	KRW 8,974	USD 8,000	1,121.75
	MUFG Bank, Ltd., Seoul					
	Branch	2018.12.19	2019.01.21	KRW 6,730	USD 6,000	1,121.70
	MUFG Bank, Ltd., Seoul					
	Branch	2018.12.28	2019.02.07	KRW 8,929	USD 8,000	1,116.15
	Bank of Nova Scotia	2018.12.19	2019.01.22	KRW 4,486	USD 4,000	1,121.50
	Bank of Nova Scotia	2018.12.21	2019.01.28	KRW 8,976	USD 8,000	1,121.95
	Bank of Nova Scotia	2018.12.27	2019.01.31	KRW 7,832	USD 7,000	1,118.90
	NH Bank	2018.12.28	2019.02.07	KRW 10,041	USD 9,000	1,115.70
	BNP Paribas	2018.12.28	2019.02.07	KRW 8,930	USD 8,000	1,116.30
	China Construction Bank	2018.12.28	2019.02.07	KRW 7,812	USD 7,000	1,116.05
	Credit Agricole Corporate					
	& Investment Bank	2018.12.28	2019.02.07	KRW 7,812	USD 7,000	1,115.95

⁽⁴⁾ The gain (loss) on valuation of derivatives for the years ended December 31, 2018 and 2017 are as follows:

In millions of won

Туре		income effect valuation loss	Net income effect of transaction loss	Other comprehensive income (loss)	
Currency forward	₩	(189)	6,132	-	
Currency swap		36,860	26,673	11,236	
	₩	36,671	32,805	11,236	

^(*) The loss on valuation of derivative instruments using cash flow hedge accounting is recognized as accumulated other comprehensive loss amounting to \(\psi_3,134\) million, net of tax as of December 31, 2018

Туре		et income effect f valuation loss	Net income effect of transaction loss	Other comprehensive income (loss)	
Currency forward	₩	(866)	(11,169)	-	
Currency swap		(127,002)	(46, 109)	(1,995)	
	₩	(127,868)	(57,278)	(1,995)	

⁽i) For the year ended December 31, 2018

⁽ii) For the year ended December 31, 2017

For the years ended December 31, 2018 and 2017

12. Other Financial Assets

(1) Other financial assets as of December 31, 2018 and 2017 are as follows:

In millions of won		2	018	2017		
	_	Current	Non-current	Current	Non-current	
Loans and receivables	₩	3,974	14,854	3,007	14,984	
Short-term financial instruments		50,000	-	50,000	-	
Derivative assets		18,236	18,275	-	3,988	
Non-current financial assets at fair value through other	=					
comprehensive income		_	225,332	-	-	
Available-for-sale financial assets		<u>-</u> _	<u> </u>	<u>-</u> _	133,788	
	₩	72,210	258,461	53,007	152,760	

(2) Loans and receivables as of December 31, 2018 and 2017 are as follows:

(i) As of December 31, 2018

In millions of won	_	Face value	Present value discount	Book value
Short-term loans				
Loans for tuition	₩	4,055	(122)	3,933
Others		41	-	41
	_	4,096	(122)	3,974
Long-term loans	_			
Loans for tuition		14,751	(1,382)	13,369
Others		1,485	-	1,485
	_	16,236	(1,382)	14,854
	₩	20,332	(1,504)	18,828

(ii) As of December 31, 2017

In millions of won	_	Face value	Present value discount	Book value
Short-term loans				
Loans for tuition	₩	3,047	(76)	2,971
Others		36	=	36
	_	3,083	(76)	3,007
Long-term loans	_			
Loans for tuition		14,523	(1,347)	13,176
Others		1,808	-	1,808
		16,331	(1,347)	14,984
	₩	19,414	(1,423)	17,991

For the years ended December 31, 2018 and 2017

13. Inventories

Inventories as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Raw materials	₩	170,822	135,488
Supplies		75,746	73,619
Inventory-in-transit		165,009	60,618
Others		323	329
	₩	411,900	270,054

^(*) There is no valuation allowance for inventories as of December 31, 2018 and 2017.

14. Non-financial Assets

Non-financial assets as of December 31, 2018 and 2017 are as follows:

In millions of won		20	18	2017		
		Current	Non-current	Current	Non-current	
Advanced payments	₩	24,194	19	6,237	44	
Prepaid expenses		14,333	1,502	10,734	1,794	
Others		43,021	8,277	36,489	6,023	
	₩	81,548	9,798	53,460	7,861	

15. Information related to the consolidated entities

(1) Information related to the consolidated entities as of December 31, 2018 and 2017 are as follows:

	Key operating		Rate of ow voting	•
Company	activities	Location	2018	2017
Garolim Tidal Power Co., Ltd.(*1)	Power generation	Republic of Korea	49.00%	49.00%
Kowepo Australia Pty., Ltd.	Overseas resources development	Australia	100.00%	100.00%
Kowepo International Corporation	Managing power plant	Philippines	99.99%	99.99%
PT Kowepo Sumsel Operation and Maintenance Services	Managing power plant	Indonesia	95.00%	95.00%
KOWEPO Bylong Pty., Ltd.(*2)	Overseas resources development	Australia	100.00%	100.00%
KOWEPO Lao International	Managing power plant	Laos	100.00%	100.00%
KOWEPO Service Co., Ltd.(*3)	Managing business facilities	Republic of Korea	100.00%	-

^(*1) Despite holding less than a majority ownership, the Group has the ability to appoint or dismiss the majority of the Board of Directors by the shareholders' agreements and has the ability to control the entity's operating and financial policies.

For the years ended December 31, 2018 and 2017

15. Information related to the consolidated entities, Continued

- (1) Information related to the consolidated entities as of December 31, 2018 and 2017 are as follows, Continued
- (*2) The ownership interest in KOWEPO Bylong Pty., Ltd. is the percentage of common share capital excluding preferred share capital which has no voting rights.
- (*3) The Group established this subsidiary during the year ended December 31, 2018.
- (2) Summary financial information of the subsidiaries as of and for the years ended December 31, 2018 and 2017 are as follows:
- (i) As of and for the year ended December 31, 2018

In millions of won

TH THIIIIONS OF WORL					Net profit
Company	_	Assets	Liabilities	Sales	or loss
Garolim Tidal Power Co., Ltd.	₩	608	345	-	(11)
Kowepo Australia Pty., Ltd.		39,341	4,702	20,294	7,316
Kowepo International Corporation		-	8	-	-
PT Kowepo Sumsel Operation and					
Maintenance Services		1,313	394	4,343	(654)
KOWEPO Bylong Pty., Ltd.		5,544	26	-	-
KOWEPO Lao International		3,800	1,015	2,899	895
KOWEPO Service Co., Ltd.		750	227	-	(77)

(ii) As of and for the year ended December 31, 2017

Company		Assets	Liabilities	Sales	Net profit or loss
Garolim Tidal power Co., Ltd.	₩	619	345	-	(12)
Kowepo Australia Pty., Ltd.		31,586	4,691	12,096	1,232
Kowepo International Corporation		-	8	-	(2)
Kowepo India Private Limited		781	-	-	(46)
PT Kowepo Sumsel Operation and					
Maintenance Services		1,350	279	7,651	444
KOWEPO Bylong Pty., Ltd.		5,875	-	-	-
KOWEPO Lao International		3,259	1,452	3,624	1,881

For the years ended December 31, 2018 and 2017

15. Information related to the consolidated entities, Continued

(3) Details of non-controlling interest as of and for the year ended December 31, 2018 are as follows:

In millions of won			PT Kowepo Sumsel	
	-	Garolim Tidal power Co., Ltd.	Operation and Maintenance Services	KOWEPO Bylong Pty., Ltd.
Current assets	₩	607	1,280	2
Non-current assets		1	33	5,542
Current liabilities		346	394	26
Net assets		262	919	5,518
Percentage of non-controlling interest		51%	5%	0.01%
Book value of non-controlling interest		134	46	1
Sales		-	4,343	-
Profit (loss) for the year		(11)	(75)	-
Percentage of non-controlling interest		51%	5%	-
Gain (loss) for the year attributable to				
non-controlling interest		(6)	(4)	-
Cash flows from operating activities		(12)	(297)	-
Cash flows from investing activities		-	134	-
Cash flows from financing activities		-	-	=
Net increase (decrease) of cash and				
cash equivalents		(12)	(163)	=

(4) Change in the scope of the consolidated entities for the year ended December 31, 2018 is as follows:

Company	Scope change	Reasons for change
Kowepo India Private Limited	Exclude from subsidiaries	disposal of subsidiary

For the years ended December 31, 2018 and 2017

16. Investments in Associates and Joint Ventures

(1) Investments in associates and joint ventures as of December 31, 2018 and 2017 are as follows:

			Rate of own voting	-
Company	Major operation	Location	2018	2017
Associates				
Cheongna Energy Co., Ltd.	Energy supply	Republic of Korea	43.90%	43.90%
Pioneer Gas Power., Ltd.	Energy supply	India	38.50%	38.50%
Eurasia Energy Holdings	Energy supply	Russia	40.00%	40.00%
Xe-Pian Xe-Namnoy Power Co., Ltd.	Energy supply	Laos	25.00%	25.00%
PT. Mutiara Jawa	Energy supply	Indonesia	29.00%	29.00%
Korea Offshore Wind Power Co., Ltd.(*1)	Energy supply	Republic of Korea	12.50%	12.50%
Daegu Solar Power Plant Co., Ltd.	Energy supply	Republic of Korea	29.00%	29.00%
Dongducheon Dream Power Co., Ltd.(*2)	Energy supply	Republic of Korea	34.01%	33.61%
Solar Power Plants Happy City Co., Ltd.	Energy supply	Republic of Korea	28.00%	28.00%
Shin Pyeongtaek Power Co., Ltd.	O&M	Republic of Korea	40.00%	40.00%
Solar School Plant Co., Ltd.(*1)	Energy supply	Republic of Korea	8.33%	8.33%
KEPCO Energy Solution Co., Ltd.(*1)	Energy supply	Republic of Korea	8.33%	8.33%
Joint ventures				
Rabigh O&M Co., Ltd.(*3)	O&M	Saudi Arabia	40.00%	40.00%
KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.(*3)	Energy supply	Australia	12.37%	-

^(*1) It is accounted for as an associate as the Group can exercise significant influence according to the shareholders agreement despite the Group's ownership interest is less than 20%.

^(*2) For the year ended December 31, 2018, the Group acquired 3,697,100 shares of redeemable convertible preferred stock through participation in redeemable convertible preferred stock offering. The Group's interest of common shares is 33.61%, and 34.01% when considering conversion of the redeemable convertible preferred stock.

^(*3) The Group accounts for its investments as investments in joint ventures since the strategic financial and operating policy decisions relating to the activities of the joint ventures require unanimous consent of the investors.

For the years ended December 31, 2018 and 2017

16. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures during the years ended December 31, 2018 and 2017 are as follows:

Other

(i) For the year ended December 31, 2018

Company	Beginning balance	Acquisi- tions	Dividends received	Share of income (loss)	comprehe- nsive income (loss)	Retained earnings	Ending balance
Associates							
Cheongna Energy Co., Ltd.	8,338	-	-	(4,873)	-	-	3,465
Pioneer Gas Power., Ltd.(*1)	38,658	-	-	(17,683)	(580)	-	20,395
Eurasia Energy Holdings	-	-	-	-	-	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd.(*2)	61,780	12,893	-	(480)	2,972	-	77,165
PT. Mutiara Jawa	-	-	-	349	16	-	365
Korea Offshore Wind Power Co., Ltd.	23,535	-	-	(1,059)	-	-	22,476
Daegu Solar Power Plant Co., Ltd.	1,718	-	(128)	412	-	-	2,002
Dongducheon Dream Power Co., Ltd.	53,233	36,971	-	(13,824)	-	6	76,386
Solar Power Plants Happy City Co., Ltd.	187	-	-	15	-	-	202
Shin Pyeongtaek Power Co., Ltd.(*2)	34,904	28,080	-	(2,946)	6,673	889	67,600
Solar School Plant Co., Ltd.	16,723	-	-	170	-	-	16,893
KEPCO Energy Solution Co., Ltd.	25,085			211		(25)	25,271
	264,161	77,944	(128)	(39,708)	9,081	870	312,220
Joint ventures							
Rabigh O&M Co., Ltd.	3,987	-	(1,147)	2,821	173	-	5,834
KIAMCO KOWEPO Bannerton Hold Co							
Pty Ltd.(*3)		4,095		(23)	(131)		3,941
	3,987	4,095	(1,147)	2,798	42		9,775
₩	268,148	82,039	(1,275)	(36,910)	9,123	870	321,995

^(*1) The investment has been reduced to zero, which resulted in discontinuation of the equity method. The accumulated unrecognized loss is $\frac{1}{2}$ W172 million as of December 31, 2018.

^(*2) The investee issued additional shares to increase capital during the year ended December 31, 2018.

^(*3) The Group made this investment during the year ended December 31, 2018.

For the years ended December 31, 2018 and 2017

16. Investments in Associates and Joint Ventures, Continued

- (2) Changes in investments in associates and joint ventures during the years ended December 31, 2018 and 2017 are as follows, Continued:
- (ii) For the year ended December 31, 2017

Company	Beginning balance	Acquisi- tions	Dividends received	Share of income (loss)	Other comprehensive income (loss)	Retained earnings	Others	Ending balance
Associates								
Cheongna Energy Co., Ltd. \	12,373	-	-	(4,035)	-	-	-	8,338
Pioneer Gas Power., Ltd.	50,740	-	-	(11,119)	(1,239)	-	276	38,658
Eurasia Energy Holdings	-	-	-	-	-	-	-	-
Xe-Pian Xe-Namnoy								
Power Co., Ltd.	51,544	22,362	-	(4,264)	(7,862)	-	-	61,780
PT. Mutiara Jawa	-	-	-	-	_	-	-	-
Korea Offshore Wind Power Co.								
Ltd.	4,482	20,150	-	(875)	(222)	-	-	23,535
Daegu Solar Power Plant Co.								
Ltd.	1,700	-	(349)	367	-	-	-	1,718
Dongducheon Dream Power Co.								
Ltd.	46,876	-	-	(10,980)	-	(34)	17,371	53,233
Solar Power Plants Happy City								
Co., Ltd.	181	-	-	6	-	-	-	187
Shin Pyeongtaek Power Co., Ltd	-	43,880	-	(10,998)	(3,616)	5,638	-	34,904
Solar School Plant Co., Ltd.	16,650	-	-	73	-	-	-	16,723
KEPCO Energy Solution Co., Ltd	24,975			110				25,085
	209,521	86,392	(349)	(41,715)	(12,939)	5,604	17,647	264,161
Joint ventures								
Rabigh O&M Co., Ltd.	4,427		(2,130)	2,236	(546)			3,987
₩	213,948	86,392	(2,479)	(39,479)	(13,485)	5,604	17,647	268,148

For the years ended December 31, 2018 and 2017

16. Investments in Associates and Joint Ventures, Continued

(3) Summary financial information of investments in associates and joint ventures as of and for the years ended December 31, 2018 and 2017 are as follows:

(i) As of and for the year ended December 31, 2018

In millions of won

TH THIIIIOHS OF WOH					Net profit
Company		Assets	Liabilities	Sales	or loss
Associates					
Cheongna Energy Co., Ltd.	₩	431,234	428,921	64,594	(11,110)
Pioneer Gas Power., Ltd.		311,742	316,810	-	(45,934)
Eurasia Energy Holdings		572	1,020	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd.		1,015,013	702,187	-	(1,214)
PT. Mutiara Jawa		24,022	22,763	14,393	3,917
Korea Offshore Wind Power Co., Ltd.		216,114	36,377	-	(8,473)
Daegu Solar Power Plant Co., Ltd.		16,828	9,923	3,695	1,645
Dongducheon Dream Power Co., Ltd.		1,512,510	1,244,178	828,430	(22,864)
Solar Power Plants Happy City Co., Ltd.		2,630	1,915	455	52
Shin Pyeongtaek Power Co., Ltd.		674,100	511,582	_	682
Solar School Plant Co., Ltd.		204,282	1,366	1,149	2,033
KEPCO Energy Solution Co., Ltd.		304,103	849	5,584	2,532
Joint ventures					
Rabigh O&M Co., Ltd.		26,172	11,587	26,387	7,173
KIAMCO KOWEPO Bannerton Hold Co					
Pty Ltd.		31,958	173	=	(222)

(ii) As of and for the year ended December 31, 2017

THI THIIIIONS OF WORL					Net profit
Company		Assets	<u>Liabilities</u>	Sales	or loss
Associates					
Cheongna Energy Co., Ltd.	₩	461,958	448,535	56,533	(9,203)
Pioneer Gas Power., Ltd.		339,271	296,898	8,215	(27,796)
Eurasia Energy Holdings		548	978	-	-
Xe-Pian Xe-Namnoy Power Co., Ltd.		858,789	607,462	-	(16,677)
PT. Mutiara Jawa		27,098	29,670	13,574	3,455
Korea Offshore Wind Power Co., Ltd.		190,195	1,985	-	(6,997)
Daegu Solar Power Plant Co., Ltd.		17,262	11,339	3,714	1,263
Dongducheon Dream Power Co., Ltd.		1,575,175	1,365,845	813,440	(33,740)
Solar Power Plants Happy City Co., Ltd.		2,782	2,120	451	22
Shin Pyeongtaek Power Co., Ltd.		175,870	90,662	_	(4,585)
Solar School Plant Co., Ltd		201,482	599	67	874
KEPCO Energy Solution Co., Ltd		313,401	12,376	5,544	1,325
Joint ventures					
Rabigh O&M Co., Ltd.		19,992	10,025	22,668	5,668

For the years ended December 31, 2018 and 2017

17. Property, Plant and Equipment

- (1) Property, plant and equipment as of December 31, 2018 and 2017 are as follows:
- (i) As of December 31, 2018

In millions of won		Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩	639,601	-	-	-	639,601
Buildings		1,523,699	(9,912)	(464,639)	(443)	1,048,705
Structures		1,342,969	(5,123)	(491,079)	(59)	846,708
Machinery		8,287,239	(63,675)	(3,120,772)	(46, 180)	5,056,612
Vehicles		9,039	(16)	(7,513)	-	1,510
Equipment		111,792	(148)	(79,029)	(6)	32,609
Tools		33,028	(111)	(25,241)	-	7,676
Construction-in-						
progress		195,416	(11,015)	-	(35,093)	149,308
Finance lease asset	S	326,551	(26)	(96,376)	<u>-</u>	230,149
	₩	12,469,334	(90,026)	(4,284,649)	(81,781)	8,012,878

(ii) As of December 31, 2017

In millions of won		Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩	627,949	-	-	-	627,949
Buildings		1,488,451	(7,126)	(399,495)	(443)	1,081,387
Structures		1,300,266	(5,349)	(446,233)	(59)	848,625
Machinery		7,878,483	(67,979)	(2,633,925)	(39,148)	5,137,431
Vehicles		8,401	(13)	(6,969)	-	1,419
Equipment		98,377	(258)	(66,250)	(6)	31,863
Tools		28,543	(175)	(22,333)	-	6,035
Construction-in-						
progress		183,354	(11,015)	-	(35,094)	137,245
Finance lease assets		326,013	(26)	(82,792)		243,195
	₩	11,939,837	(91,941)	(3,657,997)	(74,750)	8,115,149

For the years ended December 31, 2018 and 2017

17. Property, Plant and Equipment, Continued

- (2) Changes in property, plant and equipment for the years ended December 31, 2018 and 2017 are as follows:
- (i) For the year ended December 31, 2018

In millions of won			Acquisition/					
		Beginning	Capital		Depreciation	Impairment	Others	Ending
		balance	expenditure	Disposal	(*1)	loss(*2)	(*3)	balance
Land	₩	627,949					11,652	639,601
Buildings	v v	•	2.204	(00)	(CE 200)	_	•	•
-		1,088,513	3,394	(60)	(65,389)	-	32,159	1,058,617
(Government grants)		(7,126)	(3,180)	-	394	-	-	(9,912)
Structures		853,974	74	(2)	(44,846)	-	42,631	851,831
(Government grants)		(5,349)	-	-	226	-	-	(5,123)
Machinery		5,205,409	105,653	(11,315)	(493,234)	(7,031)	320,805	5,120,287
(Government grants)		(67,978)	-	139	4,164	-	-	(63,675)
Vehicles		1,432	61	-	(829)	-	862	1,526
(Government grants)		(13)	(10)	-	7	-	-	(16)
Equipment		32,121	55	(5)	(15,455)	-	16,041	32,757
(Government grants)		(258)	-	-	110	-	-	(148)
Tools		6,210	209	-	(3,566)	-	4,934	7,787
(Government grants)		(175)	-	-	64	-	-	(111)
Construction-in-progres	SS	148,260	449,462	(3,443)	-	-	(433,957)	160,322
(Government grants)		(11,015)	-	-	-	-	-	(11,015)
Finance lease assets		243,221	-	-	(13,584)	-	539	230,176
(Government grants)		(26)						(26)
	₩	8,115,149	555,718	(14,686)	(631,938)	(7,031)	(4,334)	8,012,878

^(*1) W143 million of depreciation expenses are recognized as construction-in-progress.

^(*2) Impairment loss of amounted to 47,031 million is recognized due to a fire accident at Taean Thermal Power Station #2.

^(*3) Others in the amount of W4,334 million consist of W767 million transferred from retirement benefits expense and depreciation expense, W1,129 million of capitalized interest expense, W5,515 million transferred to intangible assets, W247 million of loss due to cancellation of investment in construction in progress, and W468 million of translation effect of overseas operation financial statements. The weighted average capitalization rates for the years ended December 31, 2018 and 2017 are 2.17% and 2.70%, respectively.

For the years ended December 31, 2018 and 2017

17. Property, Plant and Equipment, Continued

(2) Changes in property, plant and equipment for the years ended December 31, 2018 and 2017 are as follows, Continued:

(ii) For the year ended December 31, 2017

In millions of won		Acquisition/					
	Beginning	Capital			Impairment		Ending
	balance	expenditure	Disposal	Depreciation	loss	Others	balance
Land W	627,556	_	-	-	-	393	627,949
Buildings	1,048,279	161	(1,109)	(62,918)	(443)	104,543	1,088,513
(Government grants)	(764)	-	-	324	-	(6,686)	(7,126)
Structures	863,724	-	(352)	(43,487)	(59)	34,148	853,974
(Government grants)	-	-	-	225	-	(5,574)	(5,349)
Machinery	4,542,251	108,469	(8,766)	(458, 105)	(39,148)	1,060,708	5,205,409
(Government grants)	(51)	-	-	4,164	-	(72,091)	(67,978)
Vehicles	2,071	-	(14)	(806)	-	181	1,432
(Government grants)	(14)	-	-	5	-	(4)	(13)
Equipment	34,093	101	(1)	(14,180)	(6)	12,114	32,121
(Government grants)	(73)	-	-	131	-	(316)	(258)
Tools	7,329	138	-	(2,814)	-	1,557	6,210
(Government grants)	-	-	-	58	-	(233)	(175)
Construction-in-progress	880,937	505,646	-	-	-	(1,238,323)	148,260
(Government grants)	(101,834)	-	-	-	-	90,819	(11,015)
Finance lease assets	250,863	-	(29,663)	(13,262)	-	35,283	243,221
(Government grants)				1		(27)	(26)
₩	8,154,367	614,515	(39,905)	(590,664)	(39,656)	16,492	8,115,149

For the years ended December 31, 2018 and 2017

18. Intangible Assets

(1) Intangible assets as of December 31, 2018 and 2017 are as follows:

(i) As of December 31, 2018

In millions of won		Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Computer software	₩	38,113	(56)	(30,500)	-	7,557
Mining rights		10,433	-	(4,068)	-	6,365
Development costs		3,271	-	(2,754)	-	517
Leasehold rights		3,857	-	(829)	-	3,028
Others		83,617	-	(81,472)	(231)	1,914
	₩	139,291	(56)	(119,623)	(231)	19,381

(ii) As of December 31, 2017

In millions of won	Acquisition cost	Government grants	Accumulated depreciation	Accumulated impairment loss	Book value
Computer software W Mining rights Development costs	33,991 10,937 3,210	(81)	(28,471) (3,092) (2,433)		5,439 7,845 777
Leasehold rights Others	2,681 83,612	- -	(443) (81,323)	(231)	2,238 2,058
₩	134,431	(81)	(115,762)	(231)	18,357

For the years ended December 31, 2018 and 2017

18. Intangible Assets, Continued

- (2) Changes in intangible assets for the years ended December 31, 2018 and 2017 are as follows:
- (i) For the year ended December 31, 2018

In millions of won		Beginning balance	Acquisition/ Capital expenditure	Disposals	Amortization	Others (*1)	Ending balance
Computer software	₩	5,520	7	-	(2,171)	4,257	7,613
(Government grants)		(81)	-	-	26	-	(55)
Mining rights		7,845	121	-	(1,218)	(383)	6,365
Development costs		777	-	-	(322)	62	517
Leasehold rights		2,238	-	-	(386)	1,176	3,028
Others		2,058	11	(5)	(153)	2	1,913
	₩	18,357	139	(5)	(4,224)	5,114	19,381

^(*1) Other additions of $\mbox{W5,114}$ million consist of $\mbox{W5,515}$ million reclassified from construction-in-progress and offset by $\mbox{W401}$ million resulting from translation of overseas operation financial statements.

(ii) For the year ended December 31, 2017

In millions of won		Beginning balance	Acquisition/ Capital expenditure	Disposals	Amortization	Others	Ending balance
Computer software	₩	4,220	6	-	(1,538)	2,832	5,520
(Government grants)		-	-	-	26	(107)	(81)
Mining rights		7,018	2,077	-	(894)	(356)	7,845
Development costs		1,172	-	=	(501)	106	777
Leasehold rights		1,542	-	-	(260)	956	2,238
Others		1,792	225	(19)	(149)	209	2,058
	₩	15,744	2,308	(19)	(3,316)	3,640	18,357

For the years ended December 31, 2018 and 2017

19. Trade and Other Payables

Trade and other payables as of December 31, 2018 and 2017 are as follows:

In millions of won		201	18	2017		
	_	Current	Non-current	Current	Non-current	
Trade payables	₩	317,433	-	165,340	-	
Other payables		61,794	-	42,665	2,189	
Accrued expenses		42,491	-	38,005	-	
Other deposits		936	-	520	-	
	₩_	422,654		246,530	2,189	

20. Borrowings and Debentures

(1) Details of borrowings and debentures as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Current Liabilities:			
Short-term borrowings	₩	40,000	-
Current portion of long-term borrowings		348	348
Current portion of long-term debentures		722,674	895,700
Less: discount on debentures		(554)	(749)
		762,468	895,299
Non-current Liabilities:			
Long-term borrowings		1,200	1,548
Debentures		4,345,430	4,110,364
Less: discount on debentures		(9,307)	(8,469)
		4,337,323	4,103,443
	₩	5,099,791	4,998,742

(2) Long-term borrowings as of December 31, 2018 and 2017 are as follows:

Lender	Description	Annual i	interest rate	Maturity date		2018	2017
Korea Energy Agency	Long term borrowings	Floating rate	KTB (three years) - 2.25%	2023.03.15 2023.06.15 2024.06.15 2024.09.15 2025.06.15 2025.12.15	₩	1,272 50 41 120 7 58	1,572 62 48 140 8 65
	Less: current portion				₩	1,548 (348) 1,200	1,895 (347) 1,548

For the years ended December 31, 2018 and 2017

20. Borrowings and Debentures, Continued

(3) Domestic debentures as of December 31, 2018 and 2017 are as follows:

In millions of won		Maturity					
THE THIM ONE OF WORL	Issue date	date	Annual inte	rest rate		2018	2017
	15540 4410	_ uate	Aiiidai iiite	iest rate	_		2017
Corporate bond #15-2	2011.05.27	2018.05.27	Fixed rate	_	₩	_	100,000
Corporate bond #16-2	2011.11.18	2018.11.18	Fixed rate	-		-	60,000
Corporate bond #16-3	2011.11.18	2021.11.18	Fixed rate	4.15%		80,000	80,000
Corporate bond #17-1	2012.10.22	2022.10.22	Fixed rate	3.22%		100,000	100,000
Corporate bond #17-2	2012.10.22	2027.10.22	Fixed rate	3.26%		100,000	100,000
Corporate bond #18-1	2013.05.07	2023.05.07	Fixed rate	2.93%		120,000	120,000
Corporate bond #18-2	2013.05.07	2028.05.07	Fixed rate	3.03%		80,000	80,000
Corporate bond #19-1	2013.06.14	2018.06.14	Fixed rate	-		-	90,000
Corporate bond #19-2	2013.06.14	2023.06.14	Fixed rate	3.38%		100,000	100,000
Corporate bond #20-1	2013.09.12	2018.09.12	Fixed rate	-		-	110,000
Corporate bond #20-2	2013.09.12	2020.09.12	Fixed rate	3.62%		100,000	100,000
Corporate bond #21	2013.10.22	2023.10.22	Fixed rate	3.67%		110,000	110,000
Corporate bond #22	2013.10.31	2023.10.31	Fixed rate	3.61%		90,000	90,000
Corporate bond #23-1	2014.10.23	2019.10.23	Fixed rate	2.47%		80,000	80,000
Corporate bond #23-2	2014.10.23	2024.10.23	Fixed rate	2.82%		120,000	120,000
Corporate bond #24-2	2014.11.20	2024.11.20	Fixed rate	2.81%		110,000	110,000
Corporate bond #25	2014.12.11	2019.12.11	Fixed rate	2.49%		80,000	80,000
Corporate bond #26-1	2015.03.05	2020.03.05	Fixed rate	2.14%		110,000	110,000
Corporate bond #26-2	2015.03.05	2025.03.05	Fixed rate	2.43%		90,000	90,000
Corporate bond #27-1	2015.05.08	2020.05.08	Fixed rate	2.33%		120,000	120,000
Corporate bond #27-2	2015.05.08	2025.05.08	Fixed rate	2.70%		80,000	80,000
Corporate bond #28	2015.07.17	2020.07.17	Fixed rate	2.27%		80,000	80,000
Corporate bond #29	2015.09.21	2020.09.21	Fixed rate	2.00%		120,000	120,000
Corporate bond #30-1	2016.01.28	2021.01.28	Fixed rate	1.88%		90,000	90,000
Corporate bond #30-2	2016.01.28	2026.01.28	Fixed rate	2.10%		110,000	110,000
Corporate bond #31	2016.07.05	2021.07.05	Fixed rate	1.36%		100,000	100,000
Corporate bond #32-1	2016.09.09	2021.09.09	Fixed rate	1.45%		90,000	90,000
Corporate bond #32-2	2016.09.09	2026.09.09	Fixed rate	1.61%		110,000	110,000
Corporate bond #33-1	2017.02.22	2022.02.22	Fixed rate	2.04%		70,000	70,000
Corporate bond #33-2	2017.02.22	2027.02.22	Fixed rate	2.34%		130,000	130,000
Corporate bond #34	2017.03.27	2020.03.27	Fixed rate	1.85%		100,000	100,000
Corporate bond #35-1	2017.05.22	2022.05.22	Fixed rate	2.07%		50,000	50,000
Corporate bond #35-2	2017.05.22	2027.05.22	Fixed rate	2.46%		40,000	40,000
Corporate bond #35-3	2017.05.22	2032.05.22	Fixed rate	2.59%		110,000	110,000
Corporate bond #36-1	2017.06,23	2022.06.23 2027.06.23	Fixed rate Fixed rate	2.08% 2.35%		40,000	40,000
Corporate bond #36-2	2017.06,23 2017.06,23	2027.06.23	Fixed rate	2.35%		70,000	70,000
Corporate bond #36-3 Corporate bond #37-1	2017.00,23	2022.07.21	Fixed rate	2.47 %		90,000 40,000	90,000 40,000
Corporate bond #37-2	2017.07.21	2022.07.21	Fixed rate	2.36%		50,000	50,000
Corporate bond #37-2	2017.07.21	2027.07.21	Fixed rate	2.47%		110,000	110,000
Corporate bond #38-1	2017.07.21	2037.07.21	Fixed rate	2.47%		50,000	50,000
Corporate bond #38-2	2017.09.05	2027.09.05	Fixed rate	2.51%		100,000	100,000
Corporate bond #39-1	2017.09.28	2022.09.28	Fixed rate	2.20%		30,000	30,000
Corporate bond #39-2	2017.09.28	2047.09.28	Fixed rate	2.46%		120,000	120,000
Corporate bond #00-2	2017.00.20	20-7.00.20	ו ואכט וענט	2.70 /0		120,000	120,000

For the years ended December 31, 2018 and 2017

20. Borrowings and Debentures, Continued

(3) Domestic debentures as of December 31, 2018 and 2017 are as follows, Continued

In millions of won	Issue date	Maturity date	Annual interest rate		2018	2017
Corporate bond #40-1	2018.04.20	2021.04.20	Fixed rate	2.335%	70,000	-
Corporate bond #40-2	2018.04.20	2038.04.20	Fixed rate	2.811%	60,000	-
Corporate bond #40-3	2018.04.20	2048.04.20	Fixed rate	2.813%	70,000	-
Corporate bond #41-1	2018.09.14	2021.09.14	Fixed rate	1.971%	80,000	-
Corporate bond #41-2	2018.09.14	2038.09.14	Fixed rate	2.270%	100,000	_
Corporate bond #41-3	2018.09.14	2048.09.14	Fixed rate	2.248%	90,000	-
Corporate bond #42-1	2018.11.01	2021.11.01	Fixed rate	1.949%	50,000	-
Corporate bond #42-2	2018.11.01	2038.11.01	Fixed rate	2.247%	60,000	-
Corporate bond #42-3	2018.11.01	2048.11.01	Fixed rate	2.201%	20,000	-
					4,170,000	3,930,000
Less: discount on deb	entures				(7,443)	(7,279)
Less: current portion					(159,922)	(359,895)
				₩	4,002,635	3,562,826

(4) Foreign debentures as of December 31, 2018 and 2017 are as follows:

In millions of won	Issue date	Maturity date	Annual interest rate		2018	2017
Swiss franc bond #1	2013.09.26	2019.03.26	Fixed rate	1.625% W	227,244	218,944
Global bond #2	2013.10.10	2018.10.10	Fixed rate	2.875%	-	535,700
Euro bond #3	2014.09.22	2019.09.22	Fixed rate	2.625%	335,430	321,420
Euro bond #4	2018.06.07	2023.06.07	Fixed rate	3.750%	335,430	_
				_	898,104	1,076,064
Less: discount on del	bentures				(2,418)	(1,939)
Less: current portion					(562,198)	(535,056)
				₩_	333,488	539,069

(5) Repayment plans of debentures and borrowings as of December 31, 2018 are as follows:

In millions of won

	Less than			More than			
		1 year	1 - 2 years	2 - 5 years	5 years	Total	
Borrowings	₩	40,348	348	814	38	41,548	
Debentures		722,674	630,000	1,645,430	2,070,000	5,068,104	
	₩	763,022	630,348	1,646,244	2,070,038	5,109,652	

(6) Changes in debentures and borrowings during the year ended December 31, 2018 are as follows:

	Beginning balance	Cash flows	Changes in foreign exchange rates	Others	Ending balance
₩	1,896	39,652	-	-	41,548
	4,996,846	21,213	67,023	(26,839)	5,058,243
₩	4,998,742	60,865	67,023	(26,839)	5,099,791
		balance ₩ 1,896 4,996,846	balance Cash flows ₩ 1,896 39,652 4,996,846 21,213	Beginning balance Cash flows foreign exchange rates ₩ 1,896 39,652 - 4,996,846 21,213 67,023	Beginning balance Cash flows foreign exchange rates Others ₩ 1,896 39,652 4,996,846 - 67,023 (26,839)

For the years ended December 31, 2018 and 2017

21. Other Financial Liabilities

Other financial liabilities as of December 31, 2018 and 2017 are as follows:

In millions of won		2018		2017	
	_	Current	Non-current	Current	Non-current
Derivative liabilities	₩	5,497	-	6,731	16,116

22. Employee Benefit Obligations

(1) The principal assumptions used on actuarial valuation as of December 31, 2018 and 2017 are as follows:

	2018	2017
Discount rate Future salary increase rate	2.33% 3.47~7.33%	2.87% 3.47 ~ 7.33%

(2) Details of the Group's expense relating to its defined benefit plans for the years ended December 31, 2018 and 2017 are as follows:

In millions of won

	-	2018	2017
Current service cost	₩	12,512	13,967
Interest cost		2,932	2,553
Gain on settlement		(61)	(70)
Expected return on plan assets		(906)	(637)
	₩	14,477	15,813

The Group's expense relating to its defined benefit plans in the financial statements are as follows:

In millions of won	2018	2017
Cost of sales \tag{\text{\ti}\text{\texi{\text{\texi{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tin}\tint{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tinit}\\ \tittt{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\tinithtet{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\tint{\text{\texi}\text{\text{\texi}\text{\text{\texi}\tint{\text{\texitilex{\texitilex{\texi{\texi}\titil\tint{\text{\texi}\tittt{\texitilex{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi}	13,380	13,471
Selling and administrative expenses	664	1,421
Construction-in-progress	433	921
₩.	14,477	15,813

Employee benefit obligations expenses of \$\fomall5,907\$ million and \$\fomall5,463\$ million, respectively, are recognized as cost of sales, and \$\fomall293\$ million and \$\fomall576\$ million, respectively, are recognized as selling and administrative expenses, and \$\fomall191\$ million and \$\fomall374\$ million, respectively, are recognized as construction-in-progress, relates to the Group's defined contribution plans for the years ended December 31, 2018 and 2017.

For the years ended December 31, 2018 and 2017

22. Employee Benefit Obligations, Continued

(3) Employee benefit obligation as of December 31, 2018 and 2017 are as follows:

In millions of won	-	2018	2017
Present value of defined benefit obligation from funded plans Fair value of plan assets	₩	116,250 (34,380)	99,375 (31,270)
Net employee benefits obligation from defined benefit plans	₩	81,870	68,105

(4) Changes in employee benefit obligation during the years ended December 31, 2018 and 2017 are as follows:

In millions of won	2018	2017
Beginning balance ₩	99,375	94,896
Current service cost	12,512	13,967
Gain (loss) on settlement	(61)	(70)
Interest cost	2,932	2,553
Remeasurements loss (gain)	5,641	(9,679)
Actual payments	(4,149)	(2,292)
Ending balance ₩	116,250	99,375

(5) Changes in the fair value of the plan assets during the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Beginning balance	₩	31,270	23,917
Expected return on plan assets		906	637
Remeasurements gain (loss)		(370)	(236)
Contributions by the employers		2,681	7,011
Actual payments		(107)	(59)
Ending balance	₩	34,380	31,270

Accumulated remeasurements loss on employee benefit obligations recorded as other comprehensive loss amounts to 429,921 million and 425,365 million, respectively, for the years ended December 31, 2018 and 2017.

(6) Fair value of major categories of plan assets as of December 31, 2018 and 2017 are as follows:

In millions of won	2018		2017	
Equity instrument	₩	446	670	
Debt instrument		2,306	3,949	
Deposits		8,096	2,618	
Others		23,532	24,033	
	₩	34,380	31,270	

Actual returns for the years ended December 31, 2018 and 2017 are \text{\$\psi\$536 million and \$\psi\$401 million, respectively.

For the years ended December 31, 2018 and 2017

22. Employee Benefit Obligations, Continued

(7) Other long-term employee benefit liabilities as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Long-service leave	₩	504	551

(8) Remeasurement component recognized in other comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Remesurements loss (gain) from changes in financial assumptions Experience adjustments Expected return	₩	(7,364) 1,723 (370)	(10,975) 1,296 236
	₩	(6,011)	(9,443)

23. Provisions

(1) Provisions as of December 31, 2018 and 2017 are as follows:

In millions of won		2	018	2017	
	_	Current	Non-current	Current	Non-current
Employee benefit provisions RPS provisions(*1)	₩	32,759	-	31,840 85.361	-
Litigation provisions(*2)		- -	-	- 00,301	115
Financial guarantee provisions(*3)		-	84	40	-
	₩	32,759	84	117,241	115

- (*1) Renewable Portfolio Standard program requires the Group to generate a specified percentage of total electricity using renewable energy and provisions are recognized for the governmental regulations to require the production of energies from renewable energy sources such as solar, wind and biomass.
- (*2) The Group recognizes a provision when it is probable that an outflow of resources embodying economic benefits required to settle the pending litigation and the amount of the obligation can be reliably estimated.
- (*3)The Group guarantees the borrowing of KEPCO Bylong Australia Pty., Ltd. to the Export-Import Bank of Korea, which result from step-by-step acquisition of KEPCO equity by government's plan of the public functions and strengthening the stability of electric power generation fuel by securing long-term stable sources.

For the years ended December 31, 2018 and 2017

23. Provisions, Continued

- (2) Changes in provisions for the years ended December 31, 2018 and 2017 are as follows:
- (i) For the year ended December 31, 2018

In millions of won		Beginning balance	Increase	Utilization	Reversal	Others	Ending balance
Employee benefit							
provisions	₩	31,840	15,169	(7,651)	(6,599)	-	32,759
RPS provisions		85,361	21,293	-	(106,654)	-	-
Litigation provisions		115	-	(115)	-	-	-
Financial guarantee							
provisions		40	58	-	-	(14)	84
7	₩	117,356	36,520	(7,766)	(113,253)	(14)	32,843

(ii) For the year ended December 31, 2017

In millions of won	-	Beginning balance	Increase	Utilization	Reversal	Ending balance
Employee benefit provisions RPS provisions	₩	29,588 84,979	41,427 12,408	(39,175)	(12,026)	31,840 85,361
Litigation provisions Greenhouse gas emission provisions		5,123	1,803 10,046	(5,793) (10,046)	(1,018)	115
Financial guarantee provisions	₩_	- 119,690	41 65,725	(1)	(13,044)	40 117,356

24. Non-financial Liabilities

Other non-financial liabilities as of December 31, 2018 and 2017 are as follows:

In millions of won		2018		2017		
		Current	Non-current	Current	Non-current	
Unearned revenue Withholdings	₩	313 5,170	-	654 5,570	-	
Others		7,652	311	11,979	244	
	₩	13,135	311	18,203	244	

For the years ended December 31, 2018 and 2017

25. Share Capital

(1) Share capital as of December 31, 2018 and 2017 are as follows:

In millions of won, except par value and number of shares

Туре	Number of shares authorized	Number of shares issued	Par value (in won)	2018	2017
Common Stock	100,000,000	33,329,119 W	5,000	166,646	166,646

(2) Changes in number of outstanding capital stock for the years ended December 31, 2018 and 2017 are as follows:

Number of shares	2018	2017
Beginning number of shares Changes for the year	33,329,119 -	33,329,119
Ending number of shares	33,329,119	33,329,119

(3) Share premium as of December 31, 2018 and 2017 are as follows:

In millions of won	2018		2017	
Paid-in capital in excess of par value	₩	1.106.252	1,106,252	
raid-iii Capitai iii excess oi pai vaide	V V	1,100,232	1,100,232	

26. Retained Earnings and Dividends

(1) Retained earnings as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Legal reserves(*1)	₩	75,614	72,714
Voluntary reserves		1,849,533	1,765,803
Retained earnings before appropriations		647,002	800,745
	₩	2,572,149	2,639,262

(*1) The Commercial Code of the Republic of Korea requires KOWEPO to appropriate as a legal reserve, an amount equal to a minimum of 10% of annual cash dividends paid, until the reserve equals 50% of its issued capital stock. The reserve is not available for the payment of cash dividends, but may be transferred to capital stock through a resolution of the Board of Directors or used to reduce accumulated deficit, if any, with the ratification of the shareholders.

For the years ended December 31, 2018 and 2017

26. Retained Earnings and Dividends, Continued

(2) Composition of voluntary reserves as of December 31, 2018 and 2017 are as follows:

In millions of won	_	2018	2017
Reserve for business stabilization(*1)	₩	181	181
Reserve for investment on social overhead capital		13,000	13,000
Reserve for business expansion		1,836,352	1,752,622
	₩	1,849,533	1,765,803

(*1) Prior to 2002, KOWEPO appropriated certain tax-deductible benefits as reserve for business stabilization, for offsetting future deficit in accordance with the relevant tax laws. Due to the amendment of such tax laws on December 11, 2002, the reserve is no longer required. However, KOWEPO continues to maintain such reserve on a voluntary basis.

(3) Changes in retained earnings before appropriations for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Beginning balance	₩	800,745	1,081,241
Profit (loss) for the year - Controlling company		(34,811)	102,813
Dividends paid		(28,996)	(66,992)
Remeasurements loss		(4,556)	7,158
Transfers to reserves		(86,630)	(326,336)
Changes in accounting policies		380	-
Hybrid securities interest		-	(2,471)
Adjustment of retained earnings of equity method		870	5,604
Others		_	(272)
Ending balance	₩	647,002	800,745

For the years ended December 31, 2018 and 2017

26. Retained Earnings and Dividends, Continued

- (4) Dividends paid for the years ended December 31, 2018 and 2017 are as follows:
- (i) For the year ended December 31, 2018

Туре	Number of shares issued	Number of treasury shares	Number of share eligible for dividends	Dividends per share (in won)	Total dividends (in millions of won)
Common Stock	33,329,119	-	33,329,119	870	28,996

(ii) For the year ended December 31, 2017

Туре	Number of shares issued	Number of treasury shares	Number of share eligible for dividends	Dividends per share (in won)	Total dividends (in millions of won)
Common Stock	33,329,119	-	33,329,119	2,010	66,992

(5) Changes in retained earnings of equity method for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Beginning balance Changes during the year	₩	5,569 870	(35) 5,604
Ending balance	₩	6,439	5,569

(6) Changes in accumulated remeasurements loss on employee benefit obligations for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Beginning balance	₩	(25,365)	(32,523)
Changes during the year		(6,011)	9,443
Income tax effect		1,455	(2,285)
Ending balance	₩	(29,921)	(25,365)

For the years ended December 31, 2018 and 2017

27. Statement of appropriation of retained earnings

Statements of appropriation of retained earnings of KOWEPO based on its separate financial statements for the years ended December 31, 2018 and 2017 are as follows:

Date of appropriation for 2018: March 29, 2019 Date of appropriation for 2017: March 30, 2018

In millions of won		2018	2017
Unappropriated retained earnings			
Balance at beginning of year	₩	711,596	711,596
Hybrid securities interest		-	(2,471)
Effects of Changes in Accounting Policies		380	-
Net income (loss)		(28, 157)	110,939
Remeasurements gain (loss)		(4,556)	7,158
		679,263	827,222
Transfer from voluntary reserves	·		
Reserves for business expansion		32,333	_
Balance at end of year before appropriation	₩	711,596	827,222
Appropriation of retained earnings			
Cash dividends		-	(28,996)
Legal reserve		-	(2,900)
Reserve for business expansion		<u> </u>	(83,730)
Unappropriated retained earnings to be carried over	₩	711,596	711,596

28. Other Components of Equity

(1) Other components of equity as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Accumulated other comprehensive income Other equity	₩	90,281 (41,784)	5,755 (41,783)
	₩	48,497	(36,028)

For the years ended December 31, 2018 and 2017

28. Other Components of Equity, Continued

(2) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

(i) For the year ended December 31, 2018

In millions of won Share in Available-Reserve for other for-sale loss on comprehe-Reserve for financial Reserve for nsive overseas financial assets loss on operations income assets at valuation valuation of translation (loss) of **FVOCI** derivatives credit associates reserve Total Beginning balance ₩ 28.683 (5,383)(7,012)(10,533)5,755 Changes in accounting policies 28,303 (28,683)(380)Valuation of FVOCI 91,877 91,877 Valuation of derivatives 11,236 11,236 Overseas operations translation (2,377)(2,377)Valuation of investments in associates 12,036 12,036 Tax effect (22, 234)(2,719)(2,913)(27,866)3,134 (9,389)Ending balance 97,946 (1,410)90,281

(ii) For the year ended December 31, 2017

In millions of won

		Available- for-sale financial assets valuation reserve	Reserve for loss on valuation of derivatives	Reserve for loss on overseas operations translation credit	Share in other comprehensive income (loss) of associates	Total
Beginning balance Valuation of available-for-	₩	(1,038)	(3,871)	(5,304)	2,953	(7,260)
sale financial assets		39,210	-	-	-	39,210
Valuation of derivatives Overseas operations		-	(1,995)	-	-	(1,995)
translation		-	-	(1,708)	-	(1,708)
Valuation of investments	;					
in associates		-	=	-	(17,791)	(17,791)
Tax effect		(9,489)	483		4,305	(4,701)
Ending balance	₩	28,683	(5,383)	(7,012)	(10,533)	5,755

(3) No changes occurred for the year ended December 31, 2018 and 2017.

For the years ended December 31, 2018 and 2017

29. Sales

Details of sales for the years ended December 31, 2018 and 2017 are as follows:

(i) For the year ended December 31, 2018

In millions of won		Domestic	Overseas
Sales of electricity	₩	4,828,353	-
Services		9,041	31,764
	₩	4,837,394	31,764
(ii) For the year ended Decer	mber 31, 2017		
In millions of won		Domestic	Overseas
Sales of electricity	₩	4,184,708	-
Services		10,022	27,719
	₩	4,194,730	27,719

For the years ended December 31, 2018 and 2017

30. Selling and Administrative Expenses

Composition of selling and administrative expenses for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Employee health and welfare benefit funds	₩	2,978 23,368	10,286 25,561
Retirement benefit expense		958	1,997
Welfare and benefit expense		2,551	2,966
Insurance expense		72	75
Depreciation		15,300	14,508
Amortization		2,253	1,967
Commission		22,830	18,396
Advertising expense		1,069	6,113
Training expense		132	259
Vehicle maintenance expense		84	66
Publishing expense .		126	172
Business promotion expense		98	122
Rent expense		1,017	1,323
Telecommunication expense		947	807
Transportation expense		14	2
Taxes and dues		1,688	1,703
Expendable supplies expense		639	1,155
Water, light and heating expense		759	148
Repairs and maintenance expense		301	2,246
Ordinary development expense		16,643	17,240
Travel expense		326	1,267
Clothing expense		-	2
Survey and analysis expense		-	1
Others		2,335	3,781
	₩	96,488	112,163

31. Other Non-operating Income and Expense

(1) Other non-operating income for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Rental income Gains from assets contributed	₩	4,725 -	4,370 362
	₩	4,725	4,732

(2) Other non-operating expenses for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017	
Donations	₩	6,580	6.123	

For the years ended December 31, 2018 and 2017

32. Other Income and Loss

Composition of other income and loss for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Gain on disposal of property, plant, and			
equipment	₩	32	995
Gain on foreign currency translation		1,010	863
Gain on foreign currency transaction		6,621	19,624
Other gains		44,313	40,057
Loss on disposal of property, plant, and			
equipment		(9,141)	(12,959)
Loss on disposal of intangible assets		(5)	-
Loss on impairment of property, plant and			
equipment, net		(7,031)	(39,656)
Loss on foreign currency translation		(173)	(1)
Loss on foreign currency transaction		(9,937)	(7,739)
Other losses		(7,775)	(10,535)
	₩	17,914	(9,351)

33. Finance Income

(1) Finance income for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Interest income	₩	6.496	2,086
Dividend income		6,510	-
Gain on valuation of derivatives		36,883	-
Gain on transaction of derivatives		41,574	3,566
Gain on foreign currency translation		108	127,005
Gain on foreign currency transaction		<u>-</u>	39,591
	₩	91,571	172,248

(2) Interest income included in finance income for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Cash and cash equivalents Loans and receivables	₩	6,075 421	1,651 435
	₩	6,496	2,086

For the years ended December 31, 2018 and 2017

34. Finance Expenses

(1) Finance expenses for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Interest expense	₩	139,150	122,359
Loss on valuation of derivatives		213	127,868
Loss on transaction of derivatives		8,769	60,844
Loss on foreign currency translation		36,860	-
Loss on foreign currency transaction		30,163	-
	₩	215,155	311,071

(2) Interest expenses included in finance expenses for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Short term borrowings	₩	54	2,861
Long term borrowings		13	16
Debentures		139,550	130,398
Trade and other payables		662	152
		140,279	133,427
Less: capitalized borrowing costs		(1,129)	(11,068)
	₩	139,150	122,359

35. Income Tax Expense

(1) Components of income tax expense for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	-	2018	2017
Current income tax expense			
Current income tax	₩	-	37,497
Adjustment for prior period		(3,285)	(23,147)
Income tax charged directly to equity		(22,346)	(9,567)
	-	(25,631)	4,783
Deferred income tax expense	-		
Generation and realization of temporary differences		54,308	11,441
Reclassification of equity to profit or loss		(1,153)	(749)
Amount due to tax deficits, tax credits and temporary differences that			
were not recognized in the past		3,423	30,614
	-	56,578	41,306
Income tax expense	₩	30,947	46,089

For the years ended December 31, 2018 and 2017

35. Income Tax Expense, Continued

(2) Reconciliation between the actual income tax expense and that amount computed by applying 24.2% to profit before income tax expense for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	-	2018	2017
Profit (loss) before income tax expense	₩	(3,874)	148,918
Income tax expense in accordance with statutory tax rate	-	3,289	37,811
Adjustments Effects of the application of accumulative tax rate		(462)	(462)
Effects on non-taxable income		-	785
Effects of non-deductible expenses		31,076	2,145
Effects of tax credits or exemptions		(3,094)	(1,657)
Amount due to tax deficits, tax credits and temporary differences that		2 422	20 614
were not recognized in the past	-	3,423	30,614 31,425
Adjustment for prior period		(3,285)	(23,147)
Income tax expense	₩	30,947	46,089

The average effective tax rate for the year ended December 31, 2018 is not presented as a result of negative average effective tax rate due to net loss before income tax expense.

The average effective tax rates for the year ended December 31, 2017 is 30.95%

(3) Relating to items directly to equity in income tax for the years ended December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017	
	\			075
Interest payments on hybrid securities	₩		=	9/5

(4) Income tax recognized in other comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	2018	2017
Net change in the non-current financial assets at fair value through other comprehensive income, net of tax W Gain (loss) on valuation of available-for-sale financial	(22,234)	-
assets, net	-	(9,489)
Gain (loss) on valuation of derivatives using cash flow		
hedge accounting, net	(1,566)	1,232
Remeasurements of defined benefit obligation	1,454	(2,285)
Income tax expenses (benefit) ₩	(22,346)	(10,542)

For the years ended December 31, 2018 and 2017

35. Income Tax Expense, Continued

- (5) Recognized deferred income tax assets (liabilities) in the statement of financial position for the years ended December 31, 2018 and 2017 are as follows:
- (i) For the year ended December 31, 2018

In millions of won	-	Balance as of January 1, 2018	Amounts recognized in profit or loss	Amounts recognized in other comprehensive income (loss)	Amounts reclassified equity to profit or loss	Balance as of December 31, 2018
Deferred tax on temporary differences						
Long-term employee benefits Cash flow hedges Property, plant and equipment Intangible assets Financial assets at fair value	₩	16.815 4,564 (327,896) 56	1,543 (9,350) (19,398)	1.454 (1,566) -	(1,153) - -	19.812 (7,505) (347,294) 56
through other comprehensive Foreign currency translation Other provision		(10,069) (1,348) (4,239)	9,170	(22,234)	- - -	(32,303) 7,822 (4,239)
Others Total	₩	64,197 (257,920)	(12,596) (30,631)	(22,346)	(1,153)	<u>51,601</u> (312,050)

(ii) For the year ended December 31, 2017

In millions of won		Balance as of January 1, 2017	Amounts recognized in profit or loss	Amounts recognized in other comprehensive income (loss)	Amounts recognized directly in equity	Amounts reclassified equity to profit or loss	Balance as of December 31, 2017
Deferred tax on temporary differences	,						
Long-term employee benefits	₩	16,970	2,130	(2,285)	-	-	16,815
Cash flow hedges Property, plant and		(35,205)	39,286	1,232	-	(749)	4,564
equipment		(276,581)	(51,315)	-	-	-	(327,896)
Intangible assets Available-for-sale financial		56	-	-	-	-	56
assets		453	(1,033)	(9,489)	-	-	(10,069)
Foreign currency translation		37,177	(38,525)	-	-	-	(1,348)
Other provision		(4,239)	-	-	-	-	(4,239)
Others		45,515	17,707		975		64,197
Total	₩	(215,854)	(31,750)	(10,542)	975	(749)	(257,920)

For the years ended December 31, 2018 and 2017

35. Income Tax Expense, Continued

(6) Deferred tax assets (liabilities) presented in the statement of financial position are as follows:

In millions of won		2018	
Deferred income tax assets	₩	386	234
Deferred income tax liabilities		(312,436)	(258, 154)
	₩	(312,050)	(257,920)

36. Expenses Classified by Nature

Expenses classified by nature for the years ended December 31, 2018 and 2017 are as follows:

(1) For the year ended December 31, 2018

In millions of won		Selling and administrative expenses	Cost of sales	Total
Raw materials used	₩	•	3,551,927	3,551,927
Employee health and welfare	₩	_	3,551,527	3,551,527
benefit funds		2,978	_	2,978
Salaries		23,368	177,009	200,377
Retirement benefit expense		958	19,287	20,245
Welfare and benefit expense		2,551	17,396	19,947
Insurance expense		72	10,050	10,122
Depreciation		15,300	616,237	631,537
Amortization		2,253	1,239	3,492
Commission		22,830	24,254	47,084
Advertising expense		1,068	338	1,406
Training expense		132	236	368
Vehicle maintenance expense		84	61	145
Publishing expense		126	185	311
Business promotion expense		98	309	407
Rent expense		1,017	15,104	16,121
Telecommunication expense		947	139	1,086
Transportation expense		14	26	40
Taxes and dues		1,687	23,762	25,449
Expendable supplies expense		639	732	1,371
Water, light and heating expense		759	387	1,146
Repairs and maintenance		000	450.400	450 400
expense		302	153,166	153,468
Ordinary development expense		16,643	15,987	32,630
Travel expense		327	1,237	1,564
Clothing expense		-	289	289
Survey and analysis expense Others		2,335	103 2,649	103 4,984
Others	₩			
	₩.	96,488	4,632,109	4,728,597

For the years ended December 31, 2018 and 2017

36. Expenses Classified by Nature, Continued

(2) For the year ended December 31, 2017

In millions of won		Selling and administrative expenses	Cost of sales	Total
Raw materials used	₩	-	2,740,581	2,740,581
Employee health and welfare				
benefit funds		10,286	-	10,286
Salaries		25,561	170,417	195,978
Retirement benefit expense		1,997	18,933	20,930
Welfare and benefit expense		2,966	15,012	17,978
Insurance expense		75	11,582	11,657
Depreciation		14,508	573,408	587,916
Amortization		1,967	1,349	3,316
Commission		18,396	22,386	40,782
Advertising expense		6,113	608	6,721
Training expense		259	235	494
Vehicle maintenance expense		66	70	136
Publishing expense		172	176	348
Business promotion expense		122	286	408
Rent expense		1,323	13,512	14,835
Telecommunication expense		807	141	948
Transportation expense		2	37	39
Taxes and dues		1,703	21,792	23,495
Expendable supplies expense		1,155	706	1,861
Water, light and heating expense Repairs and maintenance		148	887	1,035
expense		2,246	146,384	148,630
Ordinary development expense		17,240	12,307	29,547
Travel expense		1,267	684	1,951
Clothing expense		2	301	303
Survey and analysis expense		1	87	88
Others		3,781	(3,079)	702
	₩	112,163	3,748,802	3,860,965

For the years ended December 31, 2018 and 2017

37. Earnings (loss) per Share

(1) Basic earnings (loss) per share for the years ended December 31, 2018 and 2017 are as follows:

In won		2018	2017
	10/	(4.044)	0.005
Basic earnings (loss) per share	₩	(1,044)	3,085

- (*) Since the Group does not own dilutive securities, basic earnings per share is identical to dilutive earnings per share.
- (2) Profit attributable to controlling interests and weighted average number of common shares outstanding for the years ended December 31, 2018 and 2017 are as follows:

In millions of won, except for number of share	2018	2017
Profit(loss) attributable to controlling interest \	(34.811)	102.813
Weighted average number of common shares	33,329,119	33,329,119

38. Risk Management

(1) Capital risk management

The Group manages its capital to ensure that it will be able to continue as a going concern while maximizing the return to shareholder through the optimization of the debt and equity balance. The capital structure of the Group consists of net debt (offset by cash and bank balances) and equity. The Group's overall capital risk management strategy remains unchanged from that of the prior year.

Details of the Group's capital management accounts as of December 31, 2018 and 2017 are as follows:

In millions of won	2018	2017
Total borrowings and debentures	₩ 5,099,791	4,998,742
Cash and cash equivalents	(67,026)	(35,416)
Net borrowings and debentures	5,032,765	4,963,326
Total shareholder's equity	₩ 3,899,792	3,882,393
Debt to equity percentage	129.05%	127.84%

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

(2) Financial risk management

The Group is exposed to various risks related to its financial instruments, such as, market risk (currency risk, interest rate risk, price risk), credit risk. The Group monitors and manages the financial risks relating to the operations of the Group through internal risk reports which analyse exposures by degree and magnitude of risks.

The Group uses derivative financial instruments to certain hedge risk exposures. The Group's overall financial risk management strategy remains unchanged from the prior year.

1) Credit risk

Book values of the financial assets represent the maximum exposure of the credit risk. Details of the Group's level of maximum exposure to credit risk as of December 31, 2018 and 2017 are as follows:

In millions of won	. <u>-</u>	2018	2017
Cash and cash equivalents	₩	67.026	35,416
Loans and receivables	• •	18,828	17,991
Short-term financial instruments		50,000	50,000
Derivative assets (trading)		24	_
Derivative assets (hedge accounting)		36,488	3,988
Trade and other receivables		595,840	653,619
Non-current financial assets at fair value through other			
comprehensive income		225,332	-
Financial assets available-for-sale		-	133,788
Financial guarantee contract(*1)	_	6,485	6,214
	₩_	1,000,023	901,016

(*1) This amount is the maximum amount the Group will pay if requested by the assisting party. Details of financial guarantee contracts as of December 31, 2018 are as follows.

In thousands of USD

Company		Amount of Guarantee
Subsidiaries company	KEPCO Bylong Australia Pty., Ltd.	5,800

2) Market risk

Market risk is the risk that the Group's fair values of the financial instruments or future cash flows are affected by the changes in the market. Market risk consists of interest rate risk, currency risk and other price risk.

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (2) Financial risk management, Continued
- 3) Sensitivity analysis
- a) Major assets and liabilities with uncertainties in underlying assumptions
- ① Defined benefit obligation

A sensitivity analysis on the Group's defined benefit obligation assuming a 1% increase or decrease in various assumptions as of December 31, 2018 and 2017 are as follows:

In millions of won		2018 2017		017		
			1%	1%	1%	1%
Туре	Accounts	_	Increase	Decrease	Increase	Decrease
Future salary increase rate Discount rate	Defined benefit obligation Defined benefit obligation	₩	14,774 (13,076)	(27,295) 28,904	12,124 (10,785)	(10,365) 12,929

- b) Management judgment effected by uncertainties in underlying assumptions
- 1 Foreign currency risk

The Group undertakes transactions denominated in foreign currencies; consequently, exposures to currency exchange rate fluctuations arise. The carrying amount of the Group's, except for the Group's foreign subsidiary, foreign currency denominated monetary assets and monetary liabilities at the end of the reporting year are as follows:

(i) As of December 31, 2018

In thousands of foreign currencies	USD	EUR	SEK	CHF
Assets Cash and cash equivalents Liabilities	12,798	-	-	-
Trade and Other Payables	(137,411)	(10)	(480)	-
Debentures	(600,000)	-	-	(200,000)
	(737,411)	(10)	(480)	(200,000)
	(724,613)	(10)	(480)	(200,000)

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (2) Financial risk management, Continued
- 3) Sensitivity analysis, Continued
- b) Management judgment effected by uncertainties in underlying assumptions, Continued
- (ii) As of December 31, 2017

In thousands of foreign currencies	USD	JPY	AUD	GBP	EUR	CHF
Assets						
Cash and cash equivalents	38	-	-	-	-	-
Liabilities				-		
Trade and Other						
Payables	(35,414)	(27,950)	-	-	(165)	-
Debentures	(800,000)	<u>-</u>				(200,000)
	(835,414)	(27,950)	-	-	(165)	(200,000)
	(835,376)	(27,950)		_	(165)	(200,000)

A sensitivity analysis on the Group's profit with a 10% increase or decrease in currency exchange rates for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	2018		2017	
	10% 10%		10%	10%
	Increase	Decrease	Increase	Decrease
Increase (decrease) of profit before income tax	₩ (103,751)	103,751	(111,444)	111,444
Increase (decrease) of shareholder's equity(*1)	(103,751)	103,751	(111,444)	111,444

^(*1) Tax effect is not considered.

Sensitivity analysis above is conducted for monetary assets and liabilities denominated in foreign currencies other than functional currency, without consideration of hedge effect of related derivatives, as of December 31, 2018 and 2017.

To manage its foreign currency risk related to foreign currency denominated receivables and payables, the Group has a policy to enter into currency swap agreements. In addition, to manage its foreign currency risk related to foreign currency denominated expected sales transactions and purchase transactions, the Group enters into cross-currency forward agreements.

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (2) Financial risk management, Continued
- 3) Sensitivity analysis, Continued
- b) Management judgment effected by uncertainties in underlying assumptions, Continued
- (2) Interest rate risk

The Group is exposed to interest rate risk due to its borrowing with floating interest rates. A 1% increase or decrease is used when reporting interest rate risk internally to key management personnel which represents management's assessment of the reasonably possible change in interest rates.

The Group's borrowings and debentures with floating interest rates as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Short-term borrowings	₩	40,000	-
Long-term borrowings		1,548	1,896

Sensitivity analysis on the Group's borrowings and debentures assuming a 1% increase or decrease in interest rates for the year ended December 31, 2018 and 2017 are as follows:

In millions of won	20	18	2017		
	1%	1%	1%	1%	
_	Increase	Decrease	Increase	Decrease	
Increase (decrease) of profit before income tax \text{ \text{\text{\text{\text{W}}}}	(415)	415	(19)	19	
Increase (decrease) of shareholder's equity(*1)	(415)	415	(19)	19	

^(*1) Tax effect is not considered.

To manage its interest rate risks, in addition to maintaining an appropriate mix of fixed and floating rate loans, the Group enters into certain interest rate swap agreements. This analysis measures interest rate risk before reflecting hedging effect of derivatives.

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

(2) Financial risk management, Continued

4) Liquidity risk

The Group has established an appropriate liquidity risk management framework for the management of the Group's short, medium and long-term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

In addition, the Group has established credit lines on its trade financing and bank overdrafts, and through payment guarantees it has received, it maintains an adequate credit (borrowing) line. In addition, in case of major construction investment, the Group has the ability to use reserve cash or utilize long-term borrowings.

Details of contractual maturities of the Group's non-derivative financial liabilities based on agreement terms are as follows. The amount disclosed below represents the undiscounted cash flows of the principal and estimated interest amounts that the Group is obligated to pay in the future based on the earliest repayment date:

(i) As of December 31, 2018

In millions of won	Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Borrowings and debentures Trade and other payables	₩ 892,577 420,421 ₩ 1,312,998	736,930 - 736,930	1,894,022 - 1,894,022	2,528,204	6,051,733 420,421 6,472,154
(ii) As of December 31, 2017					
In millions of won	Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Borrowings and debentures Trade and other payables	₩ 1,022,798 278,370 ₩ 1,301,168	803,263 2,189 805,452	1,532,645 - 1,532,645	2,413,463 - 2,413,463	5,772,169 280,559 6,052,728

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (2) Financial risk management, Continued
- 4) Liquidity risk, Continued

The expected maturities for non-derivative financial assets as of December 31, 2018 and 2017 in details are as follows:

(i) As of December 31, 2018

In millions of won		Less than 1 year	1-5 years	Over 5 years	Uncertain	Total
Cash and cash equivalents	₩	67,026	-	-	-	67,026
Non-current financial assets at fair value through other comprehensive income		-	_	_	225,332	225,332
Loans and receivables Short-term financial		4,096	16,236	-	-	20,332
instruments		50,000	_	-	-	50,000
Trade and other receivables		593,555	2,577		<u> </u>	596,132
	₩	714,677	18,813		225,332	958,822

(ii) As of December 31, 2017

In millions of won		Less than 1 year	1-5 years	Over 5 years	Uncertain	Total
Cash and cash equivalents Available-for-sale financial	₩	35,416	-	-	-	35,416
assets		-	_	-	133,788	133,788
Loans and receivables Short-term financial		3,083	16,331	-	-	19,414
instruments		50,000	-	-	_	50,000
Trade and other receivables		653,698	219	-	-	653,917
	₩	742,197	16,550	-	133,788	892,535

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (2) Financial risk management, Continued
- 4) Liquidity risk, Continued

Derivative financial liabilities classified by maturity periods which from reporting date to maturity date of contract as of December 31, 2018 and 2017 as follows:

(i) As of December 31, 2018

In millions of won	•	Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Net settlement -Trading purpose Gross settlement	₩	-	-	-	-	-
-Trading purpose		213	_	-	-	213
-Hedge accounting purpose		5,284				5,284
	₩	5,497	_			5,497

(ii) As of December 31, 2017

In millions of won		Less than 1 year	1-2 years	2-5 years	More than 5 years	Total
Net settlement -Trading purpose Gross settlement	₩	-	-	-	-	-
-Trading purpose		866	-	-	-	866
-Hedge accounting purpose		5,865	16,116			21,981
	₩	6,731	16,116	-		22,847

(3) Fair value risk

The fair value of the Group's actively-traded financial instruments (i.e. financial assets at fair value through profit or loss and financial assets measured at fair value through other comprehensive income, etc.) is based on the traded market-price as of the reporting period end. The fair value of the Group's financial assets is the amount which the asset could be exchanged for or the amount a liability could be settled for.

The fair values of financial instruments where no active market exists or where quoted prices are not otherwise available are determined by using valuation techniques. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. If there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, the Group uses that technique.

For trade receivables and payables, the Group considers the carrying value, net of impairment, as fair value. While for disclosure purposes, the fair value of financial liabilities is estimated by discounting a financial instrument with similar contractual cash flows using the effective interest method.

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (3) Fair value risk, Continued
- 1) Fair value and book value of financial assets and liabilities as of December 31, 2018 and 2017 are as follows:

In millions of won		201	18	2017			
		Book value	Fair value	Book value	Fair value		
Assets recognized at fair value Non-current financial assets at fair value							
through other comprehensive income Available-for-sale financial assets	₩	225,332	225,332	133,788	133,788		
Derivatives assets (trading) Derivatives assets (hedge accounting)		24 36,488 261,844	24 36,488 261,844	3,988 137,776	3,988 137,776		
Assets carried at amortized cost Trade and other receivables		595,840	595,840	653,619	653,619		
Loans and receivables Short-term financial instruments		18,828 50,000	18,828 50,000	17,991 50,000	17,991 50,000		
		664,668	664,668	721,610	721,610		
Liabilities carried at fair value Derivatives liabilities (trading) Derivatives liabilities (hedge accounting)		213 5,284	213 5,284	866 21,981	866 21,981		
		5,497	5,497	22,847	22,847		
Liabilities carried at amortized cost Borrowings Debentures Trade and other payables	₩	41,548 5,058,243 422,654 5,522,445	41,548 5,121,374 422,654 5,585,576	1,896 4,996,846 248,719 5,247,461	1,896 4,964,773 248,719 5,215,388		
	•	5,522,110	3,550,670	= 0,= 17, 10 1	5,2:0,000		

²⁾ The discount rate used for calculating fair value is derived from interest rates which are observable from the market, such as government bond interest rate, after considering credit spread.

The discount rates used for calculating fair value as of December 31, 2018 and 2017 are as follows:

Туре	December 31, 2018 (%)	December 31, 2017 (%)	
Derivatives	1.09 ~ 1.21	1.34 ~ 1.48	
Debentures	-0.70 ~ 3.58	0.08 ~ 2.97	

For the years ended December 31, 2018 and 2017

38. Risk Management, Continued

- (3) Fair value risk, Continued
- 3) Fair value hierarchy

Fair values of financial instruments by hierarchy level as of December 31, 2018 and 2017, respectively, are as follows:

(i) As of December 31, 2018

In millions of won	Level 1	Level 2	Level 3	Total
Financial assets at fair value:				
Non-current financial assets at fair value	/ 202 520		21 012	225 222
through other comprehensive income Derivative assets (trading)	203,520	24	21,812	225,332 24
Derivative assets (hedge accounting)	-	36,488	-	36,488
_ contains access (nearge accessming)	203,520	36,512	21,812	261,844
Financial liabilities at fair value:				
Derivative liabilities (trading)	-	213	-	213
Derivative liabilities (hedge accounting)		5,284		5,284
₩		5,497		5,497
(ii) As of December 31, 2017				
In millions of won	Level 1	Level 2	Level 3	Total
Financial assets at fair value:				
Available-for-sale financial assets	111,653	=	22,135	133,788
Derivative assets (trading)	-	-	-	=
Derivative assets (hedge accounting)		3,988		3,988
	111,653	3,988	22,135	137,776
Financial liabilities at fair value:				
Derivative liabilities (trading)	-	866	-	866
Derivative liabilities (hedge accounting)	<u> </u>	21,981		21,981
₩	-	22,847		22,847

For the years ended December 31, 2018 and 2017

39. Related Party Transactions

(1) The nature of the Group's relationship as of December 31, 2018 is as follows:

Control relationship	Related party				
Parent company	Korea Electric Power Corporation				
Associate company	Cheongna Energy Co., Ltd. Pioneer Gas Power., Ltd. Eurasia Energy Holdings Xe-Pian Xe-Namnoy Power Co., Ltd. PT. Mutiara Jawa Korea Offshore Wind Power Co., Ltd. Daegu Solar Power Plant Co., Ltd. Dongducheon Dream Power Co., Ltd. Solar Power Plants Happy City Co., Ltd. Shin Pyeongtaek Power Co., Ltd. Solar School Plant Co., Ltd. KEPCO Energy Solution Co., Ltd.				
Joint venture company	Rabigh O&M Co., Ltd. KIAMCO KOWEPO Bannerton Hold Co Pty Ltd.				
Other related company	Korea Hydro & Nuclear Power Co., Ltd. Korea South-East Power Co., Ltd. Korea Midland Power Co., Ltd. Korea Southern Power Co., Ltd. Korea East-West Power Co., Ltd. KEPCO Engineering & Construction Company Inc. KEPCO KPS Co., Ltd. KEPCO KDN Co., Ltd. KEPCO Nuclear Fuel Co., Ltd. Korea Gas Corporation Korea Electronic Power Industrial Development Co., Ltd. Korea Power Exchange Korea Development Bank KEPCO Bylong Australia Pty., Ltd.				

For the years ended December 31, 2018 and 2017

39. Related Party Transactions, Continued

(2) All transactions between KOWEPO and its consolidated subsidiaries are eliminated upon consolidation, and transactions with related parties other than subsidiaries for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	Sales and	others	Purchase and others		
Related parties	2018	2017	2018	2017	
Korea Electric Power Corporation \wfoatsilon	4,792,853	4,265,124	63,327	73,609	
Korea Hydro & Nuclear Power Co., Ltd.	-	-	88	79	
Korea Southern Power Co., Ltd.	1,766	1,983	196	251	
Korea East-West Power Co., Ltd.	1	1	182	119	
Korea South-East Power Co., Ltd.	1	1	87	4	
Korea Midland Power Co., Ltd.	1	43	382	_	
KEPCO Engineering & Construction		_			
Company Inc.	-	-	3,021	9,844	
KEPCO KPS Co., Ltd.	1,949	1,886	76,473	72,612	
KEPCO KDN Co., Ltd.	-	=	13,461	12,124	
Cheongna Energy Co., Ltd.	9,868	6,416	58	59	
Korea Offshore Wind Power Co., Ltd.	221	236	-	-	
Daegu Solar Power Plant Co., Ltd.	128	349	2,680	2,680	
Dongducheon Dream Power Co.,Ltd.	184	1,042	-	_	
Solar power plants happy city Co., Ltd.	-	-	288	299	
Rabigh Operation & Maintenance	1,707	2,784	-	-	
Korea Gas Corporation	7,792	3,976	1,067,199	639,617	
Korea Electronic Power Industrial					
Development Co., Ltd.	4,001	4,924	40,060	33,359	
Korea Power Exchange	-	-	5,372	4,491	
Pioneer Gas Power., Ltd.	26	62	=	-	
Shin Pyeongtaek Power Co., Ltd.	8,057	9,025	-	-	
Xe-Pian Xe-Namnoy Power Co., Ltd.	671	661	=	-	
KEPCO Energy Solution Co., Ltd.	95	109	-	-	
Solar School Plant Co.,Ltd.	54	129	-	-	
KEPCO Bylong Australia Pty., Ltd.	27	1	-	-	
PT. Mutiara Jawa	40	47	-	-	
Korea Development Bank	18,275		<u> </u>	86	
₩.	4,847,717	4,298,799	1,272,874	849,233	

For the years ended December 31, 2018 and 2017

39. Related Party Transactions, Continued

(3) Receivables and payables arising from related party transactions as of December 31, 2018 and 2017 are as follows:

In millions of won		Receivables		<i>r</i> ables	Paya	Payables	
Company name	Туре	_	2018	2017	2018	2017	
Korea Electric Power Corporation	Trade receivables	₩	384,108	383,071	_	_	
	Non-trade receivables and others			252,540	_	_	
	Trade payables		-		4,623	4,892	
	Non-trade payables and others		-	-	1,294	1,302	
Korea Hydro & Nuclear Power Co., Ltd.	Non-trade payables and others		-	-	22	22	
Korea Southern Power Co., Ltd.	Non-trade receivables and others		438	-	-	-	
	Non-trade payables and others		-	-	543	92	
Korea East-West Power Co., Ltd.	Non-trade receivables and others		-	47	-	-	
	Non-trade payables and others		-	-	137	1,122	
Korea Midland Power Co., Ltd.	Non-trade payables and others		-	-	160	120	
KEPCO Engineering & Construction Company Inc.	Non-trade payables and others		-	-	786	418	
KEPCO KPS Co., Ltd.	Non-trade receivables and others		16	17	_	_	
	Non-trade payables and others		-	-	8,144	119	
KEPCO KDN Co., Ltd.	Non-trade payables and others		-	-	1,049	142	
Cheongna Energy Co., Ltd.	Non-trade payables and others		-	-	-	1	
Korea Offshore Wind Power Co., Ltd.	Non-trade receivables and others		136	260	-	-	
Dongducheon Dream Power Co., Ltd.	Non-trade receivables and others		145	526	-	-	
Rabigh Operation & Maintenance	Non-trade receivables		449	869	-	-	
Shin Pyeongtaek Power Co., Ltd.	Non-trade receivables and others		242	210	-	-	
	Non-trade payables and others		-	-	82	52	
Korea Gas Corporation	Non-trade receivables and others		426	294	-	-	
	Trade payables		-	-	116,200	41,084	
	Non-trade payables and others		-	-	314	569	
Korea Electronic Power Industrial	Trade receivables		241	295	-	-	
Development Co., Ltd.	Non-trade receivables and others		37	30	-	-	
	Non-trade payables and others		-	-	1,750	1,937	
Korea Power Exchange	Non-trade payables and others		-	-	-	1	
Xe-Pian Xe-Namnoy Power Co., Ltd.	Non-trade receivables and others		61	53	-	-	
	Loans		1,413	1,413	-	-	
KEPCO Energy Solution Co., Ltd.	Non-trade receivables and others		32	38	-	-	
KEPCO Bylong Australia Pty., Ltd.	Non-trade receivables and others		85	42	-	-	
PT. Mutiara Jawa	Non-trade receivables and others		10	-	-	-	
Korea Development Bank	Derivative assets		18,275				
		₩	595,735	639,705	135,104	51,873	

For the years ended December 31, 2018 and 2017

39. Related Party Transactions, Continued

- (4) For the years ended December 31, 2018, and 2017, there is no borrowing from the Group's related parties.
- (5) The details of derivatives transactions with related parties for the year ended December 31, 2018 are as follows:

In millions of won, and thousands of USD

			Contract amounts			t interest ate	Contract exchange
Туре	Counte rparty	Period	Pay (KRW)	Receive	Pay (%)	Receive (%)	rate (in won)
Cash flow hedge	KDB Bank	2018~2023	320,880	USD 300,000	2.03	3.75	1,069.60

(6) The salaries and other compensations to the key members of management for the years ended December 31, 2018 and 2017 are as follows:

In millions of won

Туре		2018	2017	
Short-term employee benefits	₩	502	709	
Retirement and severance benefits		118	25	

For the years ended December 31, 2018 and 2017

39. Related Party Transactions, Continued

(7) Guarantees provided to affiliates as of December 31, 2018 are as follows:

In millions of won, In thousands of USD, SAR

Debt repayment guarantee

guarantee provider	Related Parties	Type of guarantees	Credit limit	Guarantee
Korea Western Power Co., Ltd.	Cheongna Energy Co., Ltd.	Investments in associate pledged as collateral	KRW 3,465	KEB Hana Bank, etc.
Korea Western Power Co., Ltd.	Dongducheon Dream Power Co., Ltd.	Investments in associate pledged as collateral	KRW 41,389	KB Bank, etc.
Korea Western Power Co., Ltd.	Dongducheon Dream Power Co., Ltd.	Borrowing payment guarantees	KRW 20,300	BNK Securities, etc.
Korea Western Power Co., Ltd.	Daegu Solar Power Plant Co., Ltd.	Investments in associate pledged as collateral	KRW 2,002	IBK Bank
Korea Western Power Co., Ltd.	PT Mutiara Jawa	Investments in associate pledged as collateral	KRW 365	Woori Bank
Korea Western Power Co., Ltd.	KEPCO Bylong Australia Pty., Ltd.	Borrowing payment guarantees	USD 5,800	Export-Import Bank of KOREA
Korea Western Power Co., Ltd.	Rabigh O&M Co., Ltd.	Contract performance guarantees, etc.	SAR 5,600	Saudi Arabia British Bank
Korea Western Power Co., Ltd.	Xe-Pian Xe-Namnoy Power Co., Ltd.	Investments in associate pledged as collateral	KRW 77,165	Krung Thai Bank
Korea Western Power Co., Ltd.	Xe-Pian Xe-Namnoy Power Co., Ltd.	Performance guarantees	USD 2,500	Krung Thai Bank
Korea Western Power Co., Ltd.	Xe-Pian Xe-Namnoy Power Co., Ltd	Guarantees of Impounding bonus(*1)	USD 5,000	SK E&C
Korea Western Power Co., Ltd.	Solar Power Plants Happy City Co., Ltd.	Investments in associate pledged as collateral	KRW 202	NH bank
Korea Western Power Co., Ltd.	Shin Pyeongtaek Power Co., Ltd.	Investments in associate pledged as collateral	KRW 67,600	KB Bank
Korea Western Power Co., Ltd.	Korea Offshore Wind Power Co., Ltd.	Investments in associate pledged as collateral	KRW 22,476	Woori Bank, etc.

^(*1) Xe-Pian Xe-Namnoy Power Co., Ltd. entered into the agreement to pay incentives to SK E&C when the impoundment occurs upon the completion of the hydropower project. For the case that Xe-Pian Xe-Namnoy Power Co., Ltd. becomes unable to pay the incentives to SK E&C, the Group provides guarantees for payment of USD 5,000,000.

For the years ended December 31, 2018 and 2017

39. Related Party Transactions, Continued

- (8) Cheongna Energy Co., Ltd. operates integrated energy transportation and distributions and has outstanding loans from the financial institutions. In relation to the loans, the Group entered into the supplemental funding agreement for Cheongna Energy Co., Ltd. According to the agreement, all shareholders of Cheongna Energy Co., Ltd. are required to raise additional funds based on the shareholders' equity ratios when Cheongna Energy Co., Ltd. is unable to repay the principal and interest amounts.
- (9) Shin Pyeongtaek Power Co., Ltd., which is a related party of the Group, is engaged in sales of electric power and has a loan from financial institutions. As of December 31, 2018, the Group has entered into a supplementary funding agreement with Shin Pyeongtaek Power Co., Ltd. Accordingly, in the event that Shin Pyeongtaek Power Co., Ltd. has insufficient funds, or if there is any investor who cannot make a supplemental funding, the strategic investors including the Group must make an additional funding through equity investment or providing a subordinated loans in proportion to their ownership percentage. In addition, if there is such a strategic investor who cannot make a supplemental funding, an alternative investor must acquire all the shares of the strategic inverstors in accordance with the agreement. If an alternative investor fails to take over all the shares, the strategic investors, including the Group, are required to acquire the shares.

40. Assets held for sale

Assets held for sale as of December 31, 2018 and 2017 are as follows:

In millions of won		2018	2017
Investments in subsidiary(*1)	₩	747	-

(*1) Kowepo India Private Limited shares are fully reclassified into non-current asset held for sale after recognition of impairment loss due to deteriorating market conditions.

For the years ended December 31, 2018 and 2017

41. Non-cash Transactions

Significant non-cash transactions for the years ended December 31, 2018 and 2017 are as follows:

In millions of won	2018	2017
Reclassification of long-term borrowings and debentures to current		
portion W	699,417	895,332
Reclassification of construction-in-progress	435,523	1,168,444
Reclassification of non-cash purchases of property, plant and		
equipment's acquisition	20,324	27,908
Reclassification of long-term loans to current portion	2,398	1,121
Reclassification of long-term prepaid expenses to current portion	714	1,489
Reclassification of long-term deposit to current portion	1,547	2,205
Redistribution of assets held for sale by subsidiary investment		
shares	747	-

42. Commitments for Expenditure

Agreements for acquisition of property, plant and equipment as of December 31, 2018 and 2017 are as follows:

In millions of won

		20'	18	201	2017	
Description		Contract	Residual	Contract	Residual	
Payments	₩	1,231,144	47,258	1,216,274	56,035	

For the years ended December 31, 2018 and 2017

43. Commitments and Contingencies

(1) Ongoing litigations of December 31, 2018 and 2017 are as follows:

In millions of won	20)18		2017		
	Number of cases	_	Claim amount	Number of cases	_	Claim amount
As the defendant(*1)	18	₩	42,287	17	₩	41,551
As the plaintiff	7		116,880	6		108,633

(*1) The amount includes the total claim amount of \$\footnot{\psi}26,951\$ million as a co-defendant with Korea South-East Power Co., Ltd., Korea Midland Power Co., Ltd., Korea Southern Power Co., Ltd. and Korea East-West Power Co., Ltd. The outcome of the other litigations cannot be determined. However, the Group management believes that the ultimate outcomes will not have a significant impact on the Group's operations and financial position.

(2) Credit lines provided by financial institutions as of December 31, 2018 are as follows:

In millions of won, In thousands of USD

Financial Institutions	Currency	Limited amount	Exercised amount
NH Bank	USD	4,680	4,392
KB Bank	USD	40,000	362
NH Bank	KRW	200,000	-
NH Bank	USD	8,000	168
Bank of Communications	USD	30,000	-
Standard Chartered	USD	50,000	-
Bank of Nova Scotia	USD	20,000	-
BNP PARIBAS	USD	40,000	-
Credit Agricole Corporate & Investment Bank	USD	50,000	-
DBS Bank	USD	100,000	-
Deutsche Bank AG	USD	30,000	-
Korea Development Bank	USD	80,000	-
Mizuho Corporate Bank Ltd.	USD	188,000	-
Societe Generale	USD	50,000	-
KB Bank	KRW	10,000	-
NH Bank	KRW	5,000	-
Shinhan Bank	KRW	10,000	-
Woori Bank	KRW	10,000	-
IBK Bank	KRW	5,000	-
KEB Hana Bank	KRW		-
SC bank	KRW	20,000	-
KEB Hana Bank	USD	10,000	222
			748
			-
IBK Bank Woori Bank	USD USD	25,000 30,000	- 2,728
	NH Bank KB Bank NH Bank NH Bank Bank of Communications Standard Chartered Bank of Nova Scotia BNP PARIBAS Credit Agricole Corporate & Investment Bank DBS Bank Deutsche Bank AG Korea Development Bank Mizuho Corporate Bank Ltd. Societe Generale KB Bank NH Bank Shinhan Bank Woori Bank IBK Bank KEB Hana Bank SC bank KEB Hana Bank NH Bank Shinhan Bank NH Bank Shinhan Bank	NH Bank KB Bank NH Ban	Financial Institutions Currency amount NH Bank USD 4,680 KB Bank USD 40,000 NH Bank USD 8,000 Bank of Communications USD 30,000 Standard Chartered USD 50,000 Bank of Nova Scotia USD 20,000 BNP PARIBAS USD 40,000 Credit Agricole Corporate USD 50,000 & Investment Bank USD 30,000 Deutsche Bank AG USD 30,000 Korea Development Bank USD 80,000 Mizuho Corporate Bank USD 188,000 Ltd. Societe Generale USD 50,000 KB Bank KRW 10,000 NH Bank KRW 5,000 Shinhan Bank KRW 5,000 KEB Hana Bank USD 50,000 KEB Hana Bank USD 50,000 Shinhan Bank USD 50,000 Shinhan Bank USD 50,000

For the years ended December 31, 2018 and 2017

43. Commitments and Contingencies, Continued

(3) Main raw material purchase agreements as of December 31, 2018 are as follows:

Raw materials	Supplier	Contract period	Amount for year (thousand tons, thousand kls)
Bituminous coal	Australia	2019.01~2023.03	1,056
	Indonesia	2019.01~2022.05	1,715
	Russia	2019.01~2022.03	· -
	Republic of South Africa	2019.01~2022.03	346
	U.S.A	2019.01~2022.03	73
	Colombia	2019.01~2022.04	<u>-</u>
		-	3,190
Bunker-C Oil	VITOL	2018.10~2019.01	45
	VITOL	2018.11~2019.01	45
		-	90
LNG	Korea Gas Corporation	2007~2026	Determined annually
	Korea Gas Corporation	2015~2025	Determined annually

(4) Details of long-term marine transportation commitment for the safe transport of bituminous coal as of December 31, 2018 are as follows:

Shipping company	Ship name	Contract period		
Daebo International Shipping Co., Ltd.	Glovis Daylight	2015.12~2030.11		
Wooyang Shipping Co., Ltd.	Wooyang Queen	2016.07~2026.06		
Hansung Line Co., Ltd.	Western Marine	2012.01~2026.12		
Five Ocean Corporation	Nozomi	2016.12~2026.11		
H-Line	HL Balikpapan	2011.07~2026.06		
H-Line	Hyundai Leader	2016.04~2031.03		
H-Line	HL Taean	2018.05~2036.04		
K-Line	Dolce	2009.02~2019.07		
K-Line	Elettra	2009.02~2019.01		
K-Line	CSK Brilliance	2011.11~2021.10		
MOL	Gloriosa Lily	2008.10~2019.01		
MOL	Pacific Power	2008.11~2019.04		
NYK	Frontier Expedition	2013.02~2028.04		
SK Shipping Co., Ltd.	K. Western Dream	2016.03~2028.02		
SK Shipping Co., Ltd.	K.Taean	2018.10~2036.09		

⁽⁵⁾ As described in Note 38, the Group provides financial supports including the debt repayment guarantees to related parties.

For the years ended December 31, 2018 and 2017

44. Subsequent Events

- (1) As of January 9, 2019, the Group has completed liquidation of Kowepo India Private Limited, which is classified as assets held for sale.
- (2) The Group issued foreign currency bonds amounting to $\frac{\text{W}}{223,682}$ million as of February 27, 2019 for the purpose of operating and repayment funds. The details are as follows:

In thousands of CHF,						
In millions of won	Issue date	Maturity date	r	ate	CHF	KRW
			Fixed			
Swiss franc bond #2	2019.02.27	2024.02.27	rate	0.125%	200,000	223,682